

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1916.

No. 3. Original.

THE PEOPLE OF THE STATE OF NEW YORK, COMPLAINANTS,

vs.

STATE OF NEW JERSEY AND PASSAIC VALLEY SEWERAGE COMMISSIONERS, DEFENDANTS.

VOLUME V.

INDEX.

	Page
Complainants' Exhibit 99—Statements of tests.....	3997
Complainants' Exhibits 100 to 107 (inclusive)—Maps.....	3976
Complainants' Exhibits 108 to 113 (inclusive)—Photographs.....	3984
Complainants' Exhibits 114 and 115—Diagrams.....	3987
Complainants' Exhibits 116 to 122 (inclusive)—Photographs.....	3999
Complainants' Exhibit 123—Map	3993
124—Diagram of apparatus.....	3994
127—Map of proposed Passaic Valley district sewer	3995
Complainants' Exhibits 128 to 134 (inclusive)—Diagrams showing test data	3996
Complainants' Exhibit 135—Stipulation to dismiss petition of intervention of United States, &c.....	4005
136—Report of Col. William M. Black, U. S. A., and Prof. E. B. Phelps as to location of sewer outlets, &c., March 23, 1911.....	4013

	Page
Complainants' Exhibit	
137—Report of James H. Fuertes, October 14, 1911, &c.	4179
138—Diagram	4207
139—Map of watershed of Susquehanna River, &c.	4208
140—Statement showing condition of water at Harrisburg, Pennsylvania, in 1903.	4209
141—Statement showing color of turbidity of Susquehanna River at Harrisburg, Pennsylvania, in 1903.	4210
142—Map of Belfast Lough, Ireland.	4211
145—Report of Metropolitan Sewerage Commission, May 23, 1910.	4213
146—Report of Metropolitan Sewerage Commission July 25, 1910.	4219
147—Report of Metropolitan Sewerage Commission, September, 1911.	4227
148—Report of Metropolitan Sewerage Commission, November, 1911.	4245
149—Report of Metropolitan Sewerage Commission, December 2, 1911.	4255
149a—Map showing proposed sewer project.	4264a
149b—Map showing proposed sewer project.	4264b
Complainants' Exhibits 150 to 176 (inclusive)—Maps.	4265
Complainants' Exhibit	
158—Report on estimate of Central Committee, February 6, 1912.	4267
Complainants' Exhibits 159 to 160 (inclusive)—Diagrams.	4313
Complainants' Exhibits 172 to 175 (inclusive)—Statements showing results of examination of mud.	4314
Complainants' Exhibit	
176—Statements showing results in Thames dredging	4315
177—Motion by the United States to dismiss bill of complaint, &c.	4317
178—Report of observations of the pollution of harbors of the Atlantic seaboard, &c.	4320
179—Diagram	4365
180—Statement	4365a
181—Map	4366
182—Report on sanitary inspection of shellfish grounds, &c.	4367
183—Directions for tests, &c.	4417
Complainants' Exhibits 184 to 187 (inclusive)—Statements.	4419
Complainants' Exhibits 188, 189, and 190—Report in the matter of results of bacteriological examinations, &c.	4423
Complainants' Exhibit	
191—Diagram showing collection of samples of oysters from bed 490.	4426
193—Statement of temperatures, &c.	4428
194—Statements of comparative tests.	4430
195—Weekly report to Dr. H. D. Peasey, &c., June 20, 1910.	4431

INDEX.

iii

	Page
Complainants' Exhibit 196—Report of Lederle laboratories, September 16, 1912.....	4441
197—Report of copper in oysters.....	4443
198—Annual meteorological summary, 1912, with comparative data.....	4445
199—"Disposal of sewage" (extracts).....	4446
200—Preliminary reports on the disposal of New York's sewage, July, 1912.....	4447
201—Preliminary reports on the disposal of New York's sewage, September 1, 1912.....	4463
202—Preliminary reports on the disposal of New York's sewage, February, 1913, &c.	4483
203—Report of the commission introducing the reports of Messrs. Fowler and Watson, February, 1913	4543
204—Report of observations of sewage disposal works, &c., September, 1911.....	4573
Complainants' Exhibits 205 to 214 (inclusive)—Maps and charts.....	4593
Complainants' Exhibit 215—Effect of salinity and direction of discharge on the ascent of fresh water in salt water	4595
216—"Influence of sewage pollution".....	4603
Defendants' Exhibit 4—Map	4619
Defendants' Exhibits 6 and 7—Certified copy of approval of War Department to Passaic Valley sewage project—stipulation between United States and Passaic Valley Sewerage Commissioners, April 14, 1910	4619

VOLUME V.

THE PEOPLE OF THE STATE OF NEW YORK, Complainants,

vs.

STATE OF NEW JERSEY and PASSAIC VALLEY SEWERAGE COMMISSIONERS, Defendants.

EXHIBITS

THE PEOPLE OF THE STATE OF NEW YORK,
COMPLAINANTS,

VS.

STATE OF NEW JERSEY ET AL.

COMPLAINANTS' EXHIBIT No. 99.

JAMES D. MAHER,
Commissioner.

BUSINESS DISPOSAL METHODS - Dilution
 New York Harbor Dissolved Oxygen in ~~ppm~~ - Cross-Sectional
 Averages for 10 Locations - 1002 Samples Taken, on 20 Days.
 COMPUTED BY *G.A.H.* CHECKED BY *C.G.*

20.5
 1H417
 1000 ft. in Cross
 Date *June 17.* 1941

LOCATION	DISSOLVED OXYGEN						Date	Reference		
	BOTH CURRENTS		EBB CURRENT		FLOOD CURRENT					
	CC per Liter	% of Saturation	CC per Liter	% of Saturation	CC per Liter	% of Saturation				
Hudson R. at Mt. Stevens	4.11	69	4.19	70	4.04	67	80	June 19 1940 H-340+218		
	3.99	76	3.82	80	3.80	73	80	" " 820+402		
	4.50	73	4.17	75	4.42	78	120			
Hudson R. at the Mouth	—	—	3.16	56	—	—	10	July 10		
	3.11	56	3.02	54	3.10	58	45	July 20		
	3.90	55	3.84	53	3.14	50	68	Aug 10		
	3.18	56	3.00	53	3.31	58	105	Sept 20		
	3.09	56	3.01	54	3.25	58	210	" 820+397		
EAST RIVER AT THOMAS NECK	3.13	86	3.41	89	3.05	83	84	Oct 20 " 820+406		
EAST RIVER AT CLARENCE Pt.	3.72	67	4.14	77	3.70	56	30	June 30 " 840+398		
EAST RIVER AT LAWRENCE Pt.	—	—	—	—	3.69	56	45	July 10 " 840+397		
	3.43	57	3.88	60	3.28	54	64	Oct 11 " 840+406		
	3.49	57	3.68	60	3.16	55	93			
EAST RIVER, ATTREMBUTT	3.01	55	2.90	53	3.12	57	45	July 27 " 840+396		
	3.04	56	2.93	54	3.14	57	46	Aug 3 " 840+398		
	3.08	54	2.92	52	3.21	57	90	Sept 29 " 840+399		
	3.04	55	2.99	53	3.16	57	180			
KILL VAN KULL, EAST END	4.43	75	4.41	74	4.45	76	54	Oct 4 " 840+401		
THE MARROWS AT FORD	—	—	3.86	73	—	—	51	Aug 8 " 820+390		
	4.42	72	4.28	74	4.51	82	152	Sept 16 " 840+394		
	4.42	73	4.07	74	4.57	82	153			
UPPER BAY, IN VICINITY OF ROBBINS RISE	4.23	71	4.03	66	4.55	76	45	Oct 16 " 840+410		
	4.63	73	4.44	70	4.19	71	36	Oct 18 " 840+412		
	4.89	76	3.14	80	4.64	73	36	Oct 14 " 840+414		
NEWARK BAY, LOWER END	4.02	64	4.22	67	3.82	61	66	Oct 6 " 840+404		

Complaintant: Ernest M. G. P. Sawyer & Moller, Commissioners.

BUREAU DISPOSAL METHODS- Dilution
 NEW YORK HARBOR Dissolved Oxygen in 1911 HUISON RIVER FILE NO. 205
 Average % of Saturation from Cross Sections AT MT ST VINCENT DATE JUN. 3 1911
 Collected by C. H. Checked by T. C.
 File No. 1M 340

Date of collection June 29 1911 HW Govt. 10²² AM LW Govt. 1. 4¹⁷ PM

	Sample No	Time	% of Saturation	Averages Percent of Saturation		
				Each Current Depth	all Depths	both Currents + all Depths
<u>Elood Current</u>						
<u>Depth 1 ft.</u>						
	28	9.46 AM	67%	%	%	%
	26	10.10 "	67			
	29	10.40 "	67			
	32	11.26 "	72			
	35	11.55 "	72	69.0	(6 samples)	
<u>Mid-depth</u>						
	24	9.42 "	62			
	27	10.12 "	63			
	30	10.42 "	68			
	33	11.22 "	68			
	36	11.57	72	66.6	(6 samples)	
<u>Bottom</u>						
	25	9.45 "	62			
	28	10.15 "	63			
	31	10.45 "	68			
	34	11.25 "	68			
	37	12.00 PM	72	66.5	(6 samples)	67.4
<u>Ebb Current</u>						
<u>Depth 1 Ft.</u>						
	38	3.20 PM	68			
	41	3.52 "	68			
	44	4.10 "	72			
	47	4.30 "	78			
	50	4.50 "	78	72.7	(6 samples)	
<u>Mid-depth</u>						
	59	3.25 "	68			
	42	3.55 "	68			
	45	4.12 "	75			
	48	4.32 "	72			
	51	4.52 "	72	70.6	(6 samples)	
<u>Bottom</u>						
	40	3.25 "	63			
	43	3.55 "	63			
	46	4.10 "	69			
	49	4.35 "	68			
	52	4.50 "	73	67.2	(6 samples)	69.0

Ex. 98-P 2

SAMPLE DISPOSAL METHODS: Dilution
New York Harbor Dissolved Oxygen in 1931 HUSSON RIVER PLATE NO. 20.5
Average C.C. per liter - frontless Sections. AT MT ST. VINCENT REC'D NO. 1H 579
 COMPUTED BY G.E.H. CHECKED BY DATE JULY 10 1932
NOTES: IN COMPLETED FORM

Date of Collection: June 29, 1931 MW low I 10:30 AM LW 4:40 PM

Sample No	Time	Oxygen C.C. per Liter	Averages C.C. per liter		
			Each Current		Both
			Each Depth	All Depths	Currents & All Depths
<u>Flood Current</u>					
<u>Depth 1 ft.</u>					
23	9:40 AM	4.00			
26	10:10 "	4.05			
29	10:40 "	4.05			
32	11:20 "	4.05	(5 samples)		
33	11:45 "	4.05			
			4.16		
<u>Mid-depth</u>					
24	9:42 "	3.74			
27	10:12 "	3.74			
30	10:42 "	4.05			
33	11:22 "	4.05	(5 samples)		
36	11:57 "	4.35		3.98	
<u>Bottom</u>					
25	9:45 "	3.74			
28	10:15 "	3.74			
31	10:45 "	4.05			
34	11:25 "	4.05	(5 samples)		
37	12:00 PM	4.33		3.98	4.04
<u>Ebb Current</u>					
<u>Depth 1 ft.</u>					
38	9:20 PM	4.05			
41	9:52 "	4.05			
44	10:10 "	4.35			
47	10:30 "	4.68	(5 samples)		
50	10:50 "	4.68		4.58	
<u>Mid-depth</u>					
39	9:23 "	4.05			
42	9:53 "	4.05			
45	10:12 "	4.35			
48	10:32 "	4.35	(5 samples)		
51	10:52 "	4.33		4.22	
<u>Bottom</u>					
40	9:25 "	3.74			
43	9:55 "	3.74			
46	10:15 "	4.05			
49	10:35 "	4.05	(5 samples)		
52	10:55 "	4.33		3.98	4.19
					4.11

C.P. PP-P. 8

Sample Disposal Method: Dilution
New York Harbor Dissolved Oxygen in 1961
Average % of Saturation from Four Sections AT MT. ST VINCENT 20.5
Conducted by SOLAR 1M465
DATA PREPARED BY ATM 1 Jan. 9 10-2

Date of Collection Oct. 18 1961. LW/GC 1.47AM RD 00 AM

Sample No.	Time	% of Saturation	Average Percent Saturation		
			Each Current Depth	All Depths	Both Currents All Depths
1948	7.45AM	84%			
1951	7.45 "	85			
1954	8.01 "	88			
1957	8.09 "	88			
1960	8.17 "	87			
1963	9.48 "	84			
1966	9.58 "	84			
1969	10.01 "	87			
1972	10.09 "	89			
1975	10.73 "	87			
2008	4.00PM	73			
2011	4.08 "	74			
2016	4.16 "	77			
2017	4.24 "	78			
2020	4.32 "	78			
2023	5.15 "	71			
2026	5.23 "	78			
2029	5.30 "	78			
2032	5.38 "	79			
2035	5.46 "	81	81.8%		

Ex 97-FF

~~Source: DISPOSAL METHODS - Dilution~~

~~Newark Harbor Dissolved Oxygen in 1911~~ **MUDSON RIVER**
~~Average % of Saturation from Cross Section AT MT. ST. VINCENT~~

~~Conducted by G. H. H.~~~~Observed by~~

Plot No. 205
 Acc. No. 1M370
 Date 2 hr. in color 4
 Date Jan 9 1911

Date of Collection Oct. 13, 1911 11:45 AM 11:55 AM

#	Sample No.	Time	% of Saturation	Average % Saturated of Saturation		
				Each Current Depth	All Depths	Both Current & All Depths
<u>Ebb Current</u>						
1949	7:03AM	78	%			
1952	7:05 -	79				
1955	8:05 -	89				
1958	8:11 -	83				
1961	8:19 -	83				
1964	9:47 -	78				
1967	9:55 -	79				
1970	10:03 -	84				
1973	10:11 -	85				
1976	10:19 -	84				
2009	4:02PM	74				
2012	4:10 -	76				
2015	4:18 -	78				
2018	4:26 -	77				
2021	4:34 -	78				
2024	5:17 -	78				
2027	5:25 -	79				
2030	5:32 -	79				
2033	5:40 -	81				
2034	5:48 -	78				
				Interpolated		
				79 8 %		

G. H. H.

River Disposal Permitting Division
New York Harbor-Dredged Debris in the HUDDON RIVER
Arring of Substances from River Section AT Mt. St. VINCENT
604.

Permit No. 205
 Date No. 1M371
 over 5 m in over 4
 Date Jan 9, 1937

Date of Collection, Oct 13, 1936. Between 1 & 12 AM. Nov 10 AM.

Sample No.	Time	% of Volume	Average Percent of Substances		Both Current + All Depths
			Each Depth	All Depths	
<u>Ebb Current</u>					
Bottom 1.12 sec sheet 1					
Bottom depth reading 2.					
Bottom	1950	7.69AM	78		
	1952	7.57..	90		
	1954	8.05..	93		
	1959	8.13..	88		
	1962	9.21..	93		
	1963	9.49..	71		
	1968	9.57..	79		
	1971	10.00..	84		
	1974	10.10..	95		
	1977	10.21..	84		
	2010	4.40PM	78		
	2013	4.13..	75		
	2018	4.26..	78		
	2019	4.28..	77		
	2022	4.34..	78		
	2025	5.19..	75		
	2026	5.27..	79		
	2031	5.34..	79		
	2024	5.42..	81		
	2037	5.50..	82	80.0	80.3%

Flood Current, see sheet A.

60-37-16

Water Disposal Methods - Dilution
 New York Harbor Dissolved Oxygen in 1956 Hudson River
 Average % of Saturation - from Cross Sections At Mt. of VINEYARD about 4 mi. in front of
 Date Oct. 13, 1956
 Sample No. 205
 File No. 1M372
 Date Jan. 9, 1957

Date of Collection Oct. 13, 1956 L.W.G. 15°AM MW 11°AM

	Sample No.	Time	% of Saturation	Average Percent of Saturation		
				Each Current Depth	All Current Depths	Bath Currents All Depth
<u>Flo Current</u>	1979	11:45AM	74			
	1981	11:50 -	78			
	1974	12:00PM	78			
	1977	12:05 -	78			
	1980	12:15 -	77			
	1978	12:40 -	74			
	1984	2:05 -	73			
	1979	2:10 -	74			
	2004	2:30 -	75			
	2005	2:35 -	78	74.7%		
<u>Mid-depth</u>	1979	11:45AM	79			
	1982	11:55 -	79			
	1975	12:05PM	74			
	1979	12:15 -	75			
	1991	12:45 -	76			
	1994	2:05 -	67			
	1977	2:10 -	68			
	2006	2:15 -	68			
	2009	2:30 -	69	(approx)		
	2004	2:35 -	70	71.2		
<u>Bottom</u>	1980	11:45AM	72			
	2007	2:35PM	76	71.2	72.4	76.7%

60 55 67

SUBJECT: DISPOSAL METHODS- Dilution
 New York Harbor Dissolved Oxygen in 1911 HUDSON RIVER
 Average C.C. per liter from Cross Sections AT MT. ST. VINCENT
 COMPUTED BY Ella A. CHECKED BY _____
 MADE IN CONNECTION WITH _____
 FILE NO. 20.5
 ACC. NO. 1H407
 SHEET 1 TOT IN COMP 1
 DATE Jan 15 1912

Date of Collection Oct. 13, 1911 HW 10 AM HW 1133 AM.

	Sample No.	Time	Oxygen, C.C. per Liter	Averages, C.C. per Liter.		
				Each Current		Both Currents All Depths
				Each Depth	All Depths	
<u>Ebb Current</u>	<u>Depth 1 FT.</u>					
	1948	7:45 AM	5.74			
	1951	7:55 "	5.53			
	1954	8.01 "	5.55			
	1957	8.03 "	5.97			
	1960	8.17 "	5.94			
	1963	9.45 "	5.74			
	1966	9.59 "	5.83			
	1969	10.01 "	5.88			
	1972	10.09 "	5.97			
	1976	10.17 "	5.94			
	2003	4:00 PM	4.78			
	2011	4:01 "	4.87			
	2014	4.16 "	5.04			
	2017	4.24 "	5.11			
	2020	4.52 "	5.22			
	2073	5.15 "	5.06			
	2026	5.23 "	5.14			
	2029	5.30 "	5.18			
	2032	5.38 "	5.26	(no sample)		
	2035	5.46 "	5.36	5.49		

C. 75-48

SUBJ. DISPOSAL METHODS Dilution
 NEW YORK HARBOR Dissolved Oxygen in 1911 HUDSON RIVER
 Average C.C. per liter from Cross Sections AT MT. ST. VINCENT
BCH SHEET Z TOT IN COMP 4
 COMPUTED BY CHECKED BY DATE Jan 15 1912
 MADE IN CONNECTION WITH

Date of Collection, Oct. 13, 1911 LWG on I 59 AM HW 1153 AM.

	Sample No.	Time	Oxygen C.C. per Liter	AVERAGES C.C. per Liter		
				Each Current	All Depths	Both Currents All Depths
				Each Depth	All Depths	
Ebb Current	1949	7.47 AM	5.19			
Mid depth	1952	7.58 "	5.28			
	1956	8.03 "	6.60			
	1958	8.11 "	5.63			
	1961	8.19 "	5.65			
	1964	9.41 "	5.19			
	1967	9.56 "	6.28			
	1970	10.02 "	6.60			
	1973	10.11	5.68			
	1976	10.19	5.65			
	2009	4.02 PM	4.78			
	2012	4.10 "	4.87			
	2015	4.18 "	5.04			
	2018	4.26 "	5.00			
	2021	4.34 "	5.07			
	2024	5.17 "	5.06			
	2027	5.25 "	5.14			
	2030	5.37 "	5.18			
	2033	5.40 "	5.36 (203 samples)			
	2036	5.48 "	5.36	5.28		

Ex. 99-P 9

BUREAU DISPOSAL METHODS - Dilution
 NEW YORK HARBOR Dissolved Oxygen in 1911 HUDSON RIVER PAGE NO. 20.5
 Average C.C. per liter - from Cross- Sections AT MT. ST VINCENT SHEET 3 Top in Comp. A
 COMPUTED BY - 6034 CHICAGO NO. IH409
 DATE Jan 15 1912

Date of Collection Oct. 13, 1911 LW Gov. T. 8:30 AM HW 11:32 AM

	Sample No	Time	Oxygen C.C. per Liter	Averages C.C. per liter		
				Each Current	All Depth	Bottom
				Each Depth	All Depth	Currents - All Depths
Ebb Current				10 samples		
Depth 1 Ft. see sheet 1				5.49		
Mid depth see sheet 2				(20 samples)		
Bottom				5.28		
1950	7:49 AM		5.19			
1953	7:57 "		5.22			
1956	8:05 "		5.60			
1959	8:13 "		5.68			
1962	8:21 "		5.85			
1965	9:45 "		5.19			
1968	9:57 "		5.23			
1971	10:05 "		5.60			
1974	10:13 "		5.68			
1977	10:21 "		5.65			
2010	4:04 PM		4.94			
2013	4:12 "		4.87			
2016	4:20 "		5.04			
2019	4:28 "		5.00			
2022	4:36 "		5.07			
2025	5:13 "		5.06			
2028	5:27 "		5.14			
2031	5:34 "		5.18			
2034	5:42 "		5.26	20 samples		
2037	5:50 "		5.36	(no sample)	5.29	5.35

Ex 99 P. 10

DARK PAGE BLEE

SUBJECT DISPOSAL METHODS- Dilution
 NEW YORK HARBOR - Dissolved Oxygen in 1911 HUDSON RIVER FILE NO. 20.5
Average C.C per Liter from Cross Sections AT MT ST.VINCENT ACC. NO. 1H410
CROSS SECTION SHEET 4 TOT IN COOP. 4
 COMPUTED BY Cellt. CHECKED BY DATE JUN 15 1912

NAME OF COMPUTOR WITH

Date of Collection: Oct. 13, 1911 LWGv.I. 5:5 AM HW 11:37 AM

	Sample No.	Time	Oxygen C.C. per Liter	Averages C.C. per Liter.		
				Each Current		Both Currents + All Depths
				Each Depth	All Depths	
Ebb Current, see sheet 3					(60 samples)	5.35
Flood Current Depth 1 ft	1978	11:45 AM	4.94			
	1981	11:53 "	5.00			
	1984	12:01 PM	5.04			
	1987	12:09 "	5.11			
	1990	12:17 "	5.22			
	1998	2:00 "	4.78			
	1996	2:03 "	4.37			
	1999	2:16 "	4.90			
	2002	2:24 "	5.00	(10 samples)		
	2005	2:32 "	5.07	4.99		
Mid-depth	1979	11:47 AM	4.78			
	1982	11:55 "	4.87			
	1985	12:03 PM	4.90			
	1988	12:11 "	5.00			
	1991	12:19 "	5.07			
	1994	2:02 "	4.38			
	1997	2:10 "	4.44			
	2000	2:18 "	4.48			
	2003	2:26 "	4.55	(estimates)		
	2006	2:34 "	4.64	4.71		
Bottom	1980	11:49 AM	4.78			
			Same as Mid-depth	(10 samples)	(30 samples)	(30 samples)
	2007	2:36 PM	4.64	4.71	4.80	5.08

Ex. 99-P.11

SUBJECT: DISPOSAL METHOUS Dilution
 NEW YORK HARBOR-DISSOLVED Oxygen in 1911
 Average % of Saturation- from Cross Section
 COMPUTER BY: G.A.H. CHECKED BY:
 DATE: Jan 3 1912

FILE NO. 20.5
 ACC. NO. 1H 344
 SHEET 1 OF 10
 TOT. IN COUNT

Date of Collection July 19, 1911 LW Gov I. 7:27 AM HW Gov I. 1:28 PM.

	Sample No.	Time	% of Saturation	Averages	
				Percent of Saturation	
				Each Current	Both Currents
Ebb Current				Each Depth	All Depths
Dep In 1 Ft.	463	9:15 AM	55%		
	466	9:30 -	55		
	469	9:45 -	55		
	472	10:00 -	55		
	475	10:15 -	55	(5 samples)	55.6%
M.-d.-depth	464	9:16 -	53		
	467	9:31 -	53		
	470	9:46 -	53		
	473	10:01 -	53		
	476	10:16 -	53	(5 samples)	56.4
Bottoms	465	9:18 -	53		
	468	9:33 -	55		
	471	9:48 -	55		
	474	10:03 -	55		
	477	10:18 -	55	(5 samples)	56.4 (5 samples) 56.1%
Flood Current no samples taken					

By 97-P-12

SUBJECT DISPOSAL METHODS- Dilution
 NEW YORK HARBOR Dissolved Oxygen in P.M.
 Average C.C. per liter. from Gross Sections

MOUTH OF
 HUDSON RIVER

PAGE NO. 205
 ACC. NO. 1H 383

COMPUTED BY ELAAT.

CHECKED BY

DATE IN COMP. Jan. 11 192

BASED ON CONVERSATION WITH

Date of Collection, July 19 1911. LWGw.I. 7:27 AM Hwy 153 PM

	Sample No.	Time	Oxygen C.C. per Liter	Averages C.C. per liter		
				Each Current	All Depths	Bottom Currents All Depths
<u>Ebb Current</u>						
<u>Depth 1 ft.</u>						
	463	9:15 AM	3.09			
	466	9:30 "	3.09			
	463	9:45 "	3.24			
	472	10:00 "	3.09			
	475	10:15 "	3.00	(5 samples)	3.12	
<u>Mid-depth</u>						
	464	9:16 "	2.95			
	467	9:31 "	3.09			
	470	9:46 "	3.24			
	473	10:01 "	3.24	(5 samples)	3.15	
	476	10:16 "	3.24			
<u>Bottom</u>						
	465	9:18 "	2.96			
	468	9:33 "	3.09			
	471	9:48 "	3.24			
	474	10:03 "	3.24	(5 samples)	3.15	(5 samples)
	477	10:18 "	3.24			
<u>Flood Current. no samples taken.</u>						

Eg. 92 F. 13

SUBJECT DISPOSAL METHODS Dilution
 New York Harbor Dissolved Oxygen in 1911 MOUTH OF
 Average % of Saturation from Cross Sections HUDSON RIVER
 COMPUTED BY Cal H. CHECKED BY _____
 File No. 205
 Acc. No. 1H345
 Sheet 1 Tot in Comp 2
 Date Jan 3, 1912

Date of Collection July 20 1911 LW Gov. I 8:37 AM HW Gov. I 2:58 PM.

	Sample No.	Time	% of Saturation	Averages Percent of Saturation Each Current	Both + Currents + All depths
<u>Ebb Current</u>					
<u>Depth 1 Fr.</u>	478	9:15 AM	53%		
	481	9:23 -	54		
	484	9:33 -	54		
	487	9:40 -	56		
	490	9:46 -	55	(Samples) 54.4%	
<u>Mid-depth</u>	479	9:16 -	53		
	482	9:24 -	54		
	485	9:34 -	54		
	488	9:41 -	56	(Samples)	
	491	9:47 -	55	54.4	
<u>Bottom</u>	480	9:18 -	53		
	483	9:26 -	54		
	486	9:36 -	54		
	489	9:43 -	56	(Samples)	
	492	9:48 -	55	54.4	54.4%
<u>Flood Current, see sheet 2</u>					

Ex. 99-1218

BUREAU - DISPOSAL METHODS - Dilution
 NEW YORK HARBOR Dissolved Oxygen in P.M. MOUTH OF FILE NO. 205
 Average % of Saturation from Cross Sections HUDSON RIVER REC'D. 2 TUES. NOV. 2.
 DATE Jan. 3, 1913
 COMPUTED BY Leff CHIEF
 APPROVED BY Chesnutt

Date of Collection: July 20 1911 LW Gov T 8:30 AM HW Gov I 2:53 PM

	Sample No	Time	% of Saturation	Averages		
				Percent of Saturation		Both Currents & All Depths
				Each Current	Both Depths	
Ebb Current, see sheet 1						54.4% (if 1 sample)
Flood Current Depth 1 ft.	493	12:15 PM	56%			
	496	12:23 -	57			
	499	12:31 -	57			
	502	12:39 -	59			
	505	12:47 -	57			
	508	1:15 -	59			
	511	2:12 -	59			
	514	2:20 -	59			
	517	4:39 -	59			
	520	2:46 -	57			57.8%
Mid-depth	494	12:16 -	56			
	497	12:24 -	57			
	500	12:32 -	57			
	503	12:40 -	58			
	506	12:48 -	57			
	509	2:16 -	59			
	512	2:23 -	60			
	515	2:31 -	60			
	518	2:39 -	59			
	521	2:47 -	58			58.1
Bettum	495	12:18 -	56			
	498	12:26 -	57			
	511	12:34 -	57			
	504	12:42 -	58			
	507	12:50 -	57			
	510	2:18 -	59			
	513	2:25 -	60			
	516	2:33 -	60			
	519	2:41 -	59	(6 samples)	(6 samples)	(6 samples)
	522	2:49 -	58	58.1	58.0	56%

F. 99 - P. 15

BEST BY DISPOSAL METHOD Dilution
 New York Harbor Dissolved Oxygen in 1931
 Average CC per Liter from Cross Sections
Call Mt. MOUTH OF
HUDSON RIVER SHEET 205
 File No. 1M384
 Date Jan. 11 1932

COMPILED BY

CHECKED BY

End of collection with

Dates of collection July 201911 LWGorI 827AM HW 2⁵⁸ PM

	Sample No.	Time	Oxygen C.C. per Liter	Average CC per Liter		
				Each Current Depth	All Depths	Both Currents All Depths
<u>Ebb Current</u>						
	<u>Depth 1Ft</u>					
	473	9:10 AM	2.95			
	481	9:23	3.04			
	484	9:33	3.01			
	487	9:40	3.10	(5 samples)		
	490	9:46	3.03	3.02		
	<u>Mid depth</u>					
	476	9:16	2.94			
		...	Same as			
		...	Depth 1Ft	(5 samples)		
	491	9:47	3.05	3.02		
	<u>Bottom</u>					
	480	9:18	2.95			
		...	Same as			
		...	Depth 1Ft	(5 samples)		
	492	9:41	3.03	3.02	3.02	
<u>Flood Current</u>						
	<u>Depth 1Ft</u>					
	493	12:15 PM	3.09			
	496	12:23	3.14			
	499	12:31	3.15			
	502	12:39	3.14			
	505	12:47	3.17			
	508	1:15	3.24			
	511	2:22	3.29			
	514	3:30	3.29			
	517	2:38	3.24	(5 samples)		
	520	2:46	3.17	3.20		
	<u>Mid depth</u>					
	494	12:16	3.09			
		...	Same as			
		...	Depth 1Ft	(5 samples)		
	521	2:41	3.17	3.20		
	<u>Bottom</u>					
	485	12:18	3.09			
		...	Same as			
		...	Depth 1Ft	(5 samples)		
	522	2:49	3.17	3.20	3.20	3.11

C-97 P-16

DARK PAGE

SUGAR DISPOSAL METHODS Dilution

NEW YORK HARBOR Dissolved Oxygen in 1911

Average % of Saturation from Five Sections

COMPUTED BY BELA.

CHECKED BY

FILE NO. 205

ACC NO. 1H352

TAX IN CLASS Z.

DATE Jan 4 1912

MAY 10 COMPLETED 1911

Date of Collection Aug 10 1911 HWGT. 829AM LW 2²/PM

	Sample No	Time	% of Saturation	Averages		
				Each Current Depth	All Depth	Both Current & All Depth
<u>Flood Current Depth Tr.</u>						
	903	9.10 AM	54%			
	905	9.17 "	56			
	909	9.24 "	57			
	917	9.30 "	58	(5 samples)		
	915	9.37 "	56	56.0%		
<u>Mid depth</u>						
	904	9.11 "	57			
	907	9.18 "	58			
	910	9.25 "	59			
	913	9.31 "	60	(5 samples)		
	916	9.38 "	58	58.4		
<u>Bottom</u>						
	906	9.13 "	57			
	908	9.20 "	58			
	911	9.27 "	59			
	914	9.33 "	60	(5 samples)	(5 samples)	
	917	9.40 "	57	58.4	57.6%	
<u>Ebb Current see sheet 2</u>						

C. PP. P. 17

~~ANALYSIS~~ DISPOSAL METHODS - Dilution~~Bottom Harbor Dissolved Oxygen in night~~~~Average % of Saturation from Cross Sections~~~~MOUTH OF HUDDSON RIVER~~~~Set 11~~~~COLLECTED BY~~

Date No. 205

Assay No. 111355

Report 2 for water 2.

Date Jan 4 1951

~~COLLECTED BY~~~~WATER & POLLUTION CONTROL~~

Date of Collection Aug 10 1951

HWGT 8th AM LW GWT 2nd PM

	Sample No.	Time	% of Saturation	Average % of Saturation	
				Local Current	Both Currents & All Depths
<u>Elbow Current</u>	918	11:00 AM	49%		57.6% (approx.)
	921	11:17 -	53		
	924	11:24 -	54		
	927	11:30 -	53		
	930	11:37 -	50		
	933	1:30 PM	49		
	936	1:37 -	50		
	939	1:44 -	51		
	940	1:50 -	50		
	945	1:57 -	47		50.5% (approx.)
<u>Mid-depth</u>	919	11:10 AM	51		
	921	11:18 -	53		
	925	11:25 -	54		
	928	11:31 -	55		
	931	11:38 -	55		
	934	1:31 PM	51		
	937	1:38 -	55		
	940	1:45 -	54		
	943	1:51 -	53		(approx.)
	946	1:58 -	50		53.5% (approx.)
<u>Bottom</u>	920	11:15 AM	51		
	923	11:20 -	53		
	926	11:27 -	54		
	929	11:35 -	55		
	932	11:40 -	55		
	935	1:33 PM	51		
	938	1:40 -	53		
	941	1:47 -	54		
	944	1:51 -	52		(approx.)
	947	2:00 -	50		(approx.)
				53.5	51.0 (approx.)
					55% (approx.)

C-99 P-10

WATER DISPOSAL METHODS DIVISION
New Jersey Harbor Dissolved Oxygen in 1911
 Average CC per Liter from Cross Sections **MOUTH OF HUDDSON RIVER**

Per No 205
 Acc No 1H 390
 Sheet 1 for in Case 2
 Date Jan. 11 1911

Composed by G. L. A. C. 1911

Date of Collection Aug 10, 1911 Harbor T 8:30 AM LW 2:57 PM

	Sample No	Time	Oxygen CC per Liter	Averages		
				C.C. per Liter		Bottom Current
				Each Depth	All Depths	
<u>Flood Current</u> <u>Depth 1 Ft</u>	903	9:00 AM	3.15			
	906	9:17 -	3.05			
	909	9:14 -	3.09			
	915	9:30 -	3.16	(Samples)		
	916	9:17 -	3.01	3.05		
<u>Mid-depth</u>	904	9:00 AM	3.10			
	910	9:10 -	3.17			
	910	9:25 -	3.16			
	913	9:31 -	3.18	(Samples)		
	916	9:38 -	3.15	3.19		
<u>Bottom</u>	905	9:15 -	3.14			
	908	9:18 -	3.17			
	911	9:27 -	3.16			
	914	9:33 -	3.18	(Samples)		
	917	9:40 -	3.17	3.18		
<u>Flood Current</u> see sheet 2				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		
				Bottom Current		
				All Depths		

DISPOSAL METHODS: Dilution
 New York Harbor Disposal Cycles 1930
 Average CC per Liter - From Cross Sections
 6.84
 CERTIFIED BY [Signature] CHECKED BY [Signature]

MONTH OF
MAY 1931
 HARBOR RIVER
 Date June 11 1931

Date of Collection Aug 10 1931 Rec'd Cor I BIFAM LW 27 PM

	Sample No	Time	Oxygen CC per Liter	Averages CC per Liter		
				Each Current Depth	All Depths	Bath Concen. All Depths
<u>Flux Current surface</u>						9.14
<u>Side Current</u>						
Depth 1.5'	918	11:10 AM	2.76			
	921	11:15 "	2.80			
	924	11:14 "	2.97			
	927	11:30 "	2.84			
	928	11:27 "	2.14			
	929	1:30 PM	2.74			
	936	1:27 "	2.76			
	939	1:44 "	2.80			
	942	1:50 "	2.72			
	945	1:57 "	2.77			
<u>Mid-depth</u>						
	919	11:10 AM	2.81			
	925	11:18 "	2.99			
	929	11:29 "	2.37			
	930	11:31 "	3.07			
	931	11:38 "	3.08			
	934	1:31 PM	2.81			
	937	1:50 "	2.90			
	940	1:49 "	2.93			
	943	1:51 "	2.86			
	946	1:58 "	2.74			
<u>Bottom</u>						
	920	11:10 AM	2.91			
	947	2:00 PM	2.74	2.88	2.84	2.22

L.C.T. 1931

DISPOSAL METHODS Dilution
New York Harbor Dissolved Oxygen in 1936
Average % of Saturation from Cross Sections
COMPUTED BY G.L.H.

MOUTH OF
HUDSON RIVER

Plot No. 205
Sheet No. 1H 357
Survey 1 Top to Base 3
Date Jun 5 1936

Date of Collection Sept 28, 1931 Duration 10:00 AM PW/12:00 PM LW/6:00 PM

	Sample No.	Time	% of Saturation	Averages Percent of Saturation		
				Each Current Depth	All Depths	Both Currents All Depths
<u>Ebb Current Depth 1 ft</u>						
	1519	6:30 AM	51%			
	1580	6:33 -	53			
	1582	6:38 -	55			
	1588	6:51 -	56			
	1591	7:06 -	58			
	1594	7:38 -	67			
	1597	8:38 -	58			
	1600	8:48 -	58			
	1603	8:57 -	91			
	1606	9:04 -	76			
	1604	4:30 PM	53			
	1607	4:39 -	54			
	1610	4:48 -	66			
	1613	4:57 -	53			
	1616	5:06 -	53			
	1649	6:40 -	47			
	1673	6:46 -	45			
	1675	6:48 -	45			
	1678	6:50 -	33			
	1681	6:57 -	51			
				51.8%		
					LW 99	PT

SUBJECT: DISPOSAL METHODS Dilution

New York Harbor Dissolved Oxygen in 1911

MOUTH OF

Average % of Saturation from Cross Sections.

FILE NO. 205
ACC. NO. 1H358
SHEET 2 TOR IN COOP 3

COMPUTED BY Coll Jr

CHECKED BY

DATE JUN 5 1912

SAFETY & CONSOLIDATION SHEET

Date of Collection Sept 28, 1911 LWG at 6⁰⁷ AM HW 12¹⁰ PM LW 6⁰⁷ PM

	Sample No.	Time	% of Saturation	Averages Percent of Saturation		
				Each Current Depth	All Depths	Both Currents All Depths
<u>Ebb Current</u> <u>Depth 1 FT see sheet 1</u>						
				(6 samples) 51.8%		
	1580	6 32 AM	52%			
	1583	6 41 "	54			
	1586	6 5 " "	55			
	1589	6 59 "	54			
	1592	7 08 "	55			
	1595	7 32 "	51			
	1598	8 41 "	51			
	1601	8 50 "	52			
	1604	8 59 "	54			
	1607	9 08 "	53			
	1653	4 32 PM	56			
	1659	4 41 "	57			
	1661	4 50 "	58			
	166	4 59 "	59			
	1667	5 08 "	56			
	1670	6 01 "	51			
	1673	6 07 "	52			
	1676	6 14 "	52			
	1679	6 21 "	53	(6 samples)		
	1682	6 28 "	53	53.9		
<u>Bottom</u>						
	1581	6 34 AM	52			
				Same (6 samples)		
	1683	6 30 PM	53	(6 samples) 53.9		
				53.2%		
				6499 P 22		

SUBJECT DISPOSAL METHODS - Dilution
 NEW YORK HARBOR-Dissolved Oxygen in All
 Average % of Saturation - From Gass Sections MOUTH OF
GAS HUDSON RIVER SHEET 3 TOT IN COUP 3
 COMPUTED BY G.A.H. CHECKED BY FILE NO. 205
 ACC. NO. 1H359 DATE JAN 5 1962
MADE IN CONVENTION WITH

Date of Collection Sept 28, 1961 LW Gov I 6⁰⁷ AM HW 12¹³ PM LW 6⁰⁷ PM

	Sample No.	Time	% of Saturation	Averages Percent of Saturation		
				Each Current Depth	All Depths	Both Currents - All Depths
Ebb Current see sheet 2					53.2%	(6 samples)
Flood Current Depth 1 Ft	1609	1030 AM	50%			
	1612	1039 "	53			
	1615	1048 "	55			
	1618	1057 "	56			
	1621	1106 "	53			
	1624	1230 PM	55			
	1627	1239 "	55			
	1630	1248 "	57			
	1633	1257 "	57			
	1636	1 06 "	55			
	1639	230 "	58			
	1642	239 "	59			
	1645	248 "	60			
	1648	257 "	61	(5 samples)		
	1651	306 "	60	56.3%		
Mid-depth	1610	1037 AM	53			
	1613	1041 "	54			
	1616	1050 "	55			
	1619	1059 "	57			
	1622	1108 "	55			
	1625	1232 PM	57			
	1628	1241 "	59			
	1631	1250 "	60			
	1634	1259 "	61			
	1637	1 08 "	58			
	1640	232 "	60			
	1643	241 "	62			
	1646	250 "	63			
	1649	259 "	64	(5 samples)		
	1652	308 "	61	58.6		
Bottom	1611	1034 AM	53			
		Same as Mid-Depth	(6 samples)	(5 samples)	(6 samples)	
	1653	910 PM	61	58.6	57.8	56%
				Ex 49	✓ 23	

1920

THE PEOPLE OF THE STATE OF NEW YORK VS.

RECORDED IN
RECEIVED
IN
RECORDED
IN
RECORDED
IN

SUBJECT: DISPOSAL METHOD - Dilution
 New York Harbor - Dissolved Oxygen in 1911 MOUTH OF
 Average CC per Liter - From Cross Sections. HUDSON RIVER

COMPUTED BY 16614 CHECKED BY

FILE NO. 205
 ACQ NO. 1H395
 SHEET 1 Tot in Count 3
 Date Jan. 12 1912

DATA IN CONNECTION WITH

Date of Collection Sept. 28, 1911 LWGvt 6⁰⁷AM HW12⁰²PM LW6⁰⁷PM

	Sample No	Time	Oxygen CC per Liter	Averages.		
				Each Current	Both Depths	Both Currents All Depths
<u>Ebb Current Depth 1 FT</u>						
	1579	6 30 AM	3.01			
	1582	6 39 "	3.09			
	1585	6 48 "	3.19			
	1588	6 57 "	3.12			
	1591	7 06 "	3.06			
	1594	8 30 "	2.73			
	1597	8 39 "	2.94			
	1600	9 4 "	3.04			
	1603	9 57 "	3.00			
	1606	9 06 "	2.82			
	1654	4 30 PM	3.01			
	1657	4 39 "	3.08			
	1660	4 48 "	3.12			
	1663	4 57 "	3.19			
	1666	5 06 "	3.06			
	1669	6 00 "	2.73			
	1672	6 06 "	2.80			
	1675	6 13 "	2.80			
	1678	6 20 "	3.04	(Resampled)		
	1681	6 27 "	3.02	3.00		

17 99 p 24

SUBJECT DISPOSAL METHODS Dilution
FILE NO. 205
New York Harbor Dissolved Oxygen in 1911 MOUTH OF REC'D NO. 1H396
AVERAGE C.C. PER LITER. FROM CROSS SECTIONS HUDSON RIVER SHEET 2 TOT IN COUNTER 3
COMPUTED BY T. G. H. CHECKED BY DATE JAN 12 1912

Date of Collection Sept 28 1911 LWGoy 16⁰⁷AM HW 12¹³PM LWGoy PM

	Sample No.	Time	Oxygen C.C. per Liter	Averages C.C. per Liter		
				Each Current		Both
				Each Depth	All Depths	Currents All Depths
Ebb Current				(30 samples)		
Depth 1 ft	seashore			3.00		
<u>Mid-depth</u>						
	1580	6 31 AM	3.01			
	1588	6 41 "	3.08			
	1586	6 50 "	3.19			
	1589	6 59 "	3.12			
	1592	7 08 "	3.19			
	1595	8 32 "	2.92			
	1598	8 41 "	2.94			
	1601	8 50 "	3.04			
	1604	8 59 "	3.12			
	1607	3 08 "	3.06			
	1655	4 31 PM	3.18			
	1658	4 41 "	3.22			
	1661	4 50 "	3.27			
	1664	4 59 "	3.33			
	1667	5 08 "	2.9			
	1670	6 01 "	2.92			
	1673	6 07 "	2.94			
	1676	6 14 "	3.00			
	1679	6 21 "	3.04	(30 samples)		
	1682	6 28 "	3.06	3.09		
<u>Bottom</u>						
	1581	6 34 AM	3.01			
				Same as		
				Mid depth	(30 samples)	(60 bottom)
	1683	6 30 PM	3.06	3.09	3.06	

SUBJECT DISPOSAL METHODS- DILUTION
New York Harbor Dissolved Oxygen in 1961
Average C.C. per Liter. from Gauß-Sections
ELHA. COMPUTED BY
 CHECKED BY
 DATE JULY 12, 1962
PRINTED 205
 ACC NO. 11897
 SHEET 3 TOTAL 3

Date of Collection Sept 28 1911 LWG on [6⁰⁷ AM HW 12¹⁹ PM LW 6⁰⁷ PM

Sample No.	Time	Oxygen C.C. per Liter	Averages C.C. per Liter		
			Each Current	Both Depths	Both Currents - All Depths
Ebb Current <u>see sheet 2</u>				3.06 (15 samples)	
Flood Current <u>Depth 1 FT</u>	1609 10:30 AM	3.07			
	1612 10:30 ..	3.07			
	1615 10:48 ..	3.19			
	1618 10:57 ..	3.27			
	1621 11:06 ..	3.06			
	1624 11:30 PM	3.14			
	1627 12:59 ..	3.19			
	1630 1:48 ..	3.27			
	1633 12:57 ..	3.33			
	1636 1:06 ..	3.19			
	1639 2:30 ..	3.26			
	1642 2:59 ..	3.36			
	1645 3:48 ..	3.41			
	1648 2:57 ..	3.46		3.24 (15 samples)	
	1651 3:06 ..	3.47			
<u>Mid-depth</u>	1610 10:35 AM	3.01			
	1613 10:41 ..	3.08			
	1616 10:50 ..	3.10			
	1619 10:58 ..	3.27			
	1622 11:08 ..	3.10			
	1625 12:52 PM	3.26			
	1628 12:41 ..	3.34			
	1631 12:50 ..	3.41			
	1634 1:59 ..	3.48			
	1637 1:08 ..	3.33			
	1640 2:33 ..	3.41			
	1643 2:41 ..	3.50			
	1646 2:50 ..	3.55			
	1649 2:59 ..	3.62		3.34 (15 samples)	
	1652 3:08 ..	3.47			
<u>Bottom</u>	1611 10:38 AM	3.01			
	1614 ..	Same as			
	1617 ..	Mid-depth	(15 samples)	(15 samples)	(15 samples)
	1653 3:10 PM	3.47	3.34	3.31	3.18

SUBJECT DISPOSAL METHODS: Dilution
 NEW YORK HARBOR DISSOLVED OXYGEN IN 1911 EAST RIVER
 Average % of Saturation - from Cross Sections AT THROGGS NECK SHEET 2. Tot in Count 2.
 60 ft -

FILE NO. 20.5
 ADD. NO. 1H378
 SHEET 2. Tot in Count 2.
 DATE Jan 10, 1912.

COMPUTED BY _____
 CHECKED BY _____
 DRAWN AND CORRECTED BY _____

Date of Collection, Oct 25 1911 Hr Govt 9:2 AM.

	Sample No	Time	% of Saturation	Averages Percent of Saturation.		
				Each Current Depth	All Depths	Both Currents & All Depths
Flood Current (W-->E)	see sheet 1				(7 samples)	82.3%
Ebb Current (W-->WE)						
Depth 1 Ft						
	2182	9:30 AM	81%			
	2185	9:45 "	73			
	2189	9:55 "	80			
	2191	11:30 "	88			
	2194	11:45 "	90			
	2197	11:55 "	91			
	2200	1:30 PM	98			
	2202	1:45 "	99		(5 samples)	
	2204	1:55 "	90			86.2%
Mid depth	2183	9:32 AM	87			
	2186	9:44 "	87			
	2189	9:57 "	89			
	2192	11:23 "	88			
	2195	11:44 "	96			
	2198	11:57 "	91			
	2201	1:32 PM	91			
	2204	1:44 "	93		(5 samples)	
	2207	1:57 "	94			90.1
Bottom	2184	9:35 AM	87			
			Bottom 0.5			
			Mid-depth	(5 samples)	(7 samples)	(6 samples)
	2208	9:40 PM	94	90.1	98.8	96.7%

E. 99 P. 17

SOLID DISPOSAL METHODS- Dilution
New York Harbor Dissolved Oxygen in 1931
Analyze C.C. per Liter. from Gross Sections
ELA. COMPUTED BY

EAST RIVER	FILE NO. 205 ACC NO. 1H415 SHEET 1 TOP IN CAMP 2.
AT THROGG NECK	DATE Jan 16 1932
CHERISHED BY	

MADE AT THROGG NECK ON 1/16/32

Date of Collection Oct 25 1911 H.W.Gov I 9th AM.

~~DISPOSAL METHODS~~ - Dilution
 New York Harbor Dissolved Oxygen in 1951
 Average C.C. per liter. from Goss Sections
 EAST RIVER acc no. 205
 AT THROGS NECK 2 Jan 16, 1951
 DATE
 1M416
 Jan 16, 1951

Date of Collection, Oct 25 1911. Min Cov I 902 AM.

Sample No.	Time	Oxygen C C per Liter	Averages C C per Liter		
			Flood Current Depth	All Depths	Both All Depths
Flood Current ($W = E$)	see sheet 1				
				5.05	
Flood Current ($W \leftarrow \rightarrow E$)					
Depth 1 ft.					
2182	9:30 AM	4.94			
2183	9:45 "	4.87			
2188	9:55 "	4.90			
2191	11:30 "	5.33			
2194	11:43 "	5.45			
2197	11:55 "	5.46			
2200	1:30 PM	5.38			
2203	1:52 "	5.41			
2206	1:59 "	5.46	5.24	(sample)	
Mid depth					
2183	9:30 AM	5.35			
2186	9:46 "	5.41			
2189	9:57 "	5.46			
2192	11:31 "	5.33			
2195	11:46 "	5.42			
2198	11:51 "	5.46			
2201	1:33 PM	5.60			
2206	1:46 "	5.60			
2207	1:57 "	5.49	5.49	(sample)	
Bottom					
2184	9:35 AM	5.33			
.....			
2201	1:00 PM	5.74	5.43	5.41	5.23

1926

THE PEOPLE OF THE STATE OF NEW YORK VS.

STATION: Disposal Methods, Dilution
 New York Harbor Dissolved Oxygen in 1921 EAST RIVER
 Average % of Saturation from Cross Sections ALCLASON PT.
 Collected by Blatt Checked by _____
 Date Jan 3 1921

Date of Collection June 30, 1921 HWGyr I 1:23 AM LWGyr I 3:27 PM

	Sample No	Time	% of Saturation	Average Percent of Saturation Each Current	All Bath Depths	Bath Currents % All Depths
Flood Current (W—E) Depth 1 FT	55	11:00 AM	60%			
	56	11:25 "	60			
	59	11:46 "	55			
	62	12:00 PM	55			
	63	12:36 "	55			
				52.0%		
Mid-depth	54	11:03 AM	58			
	57	11:37 "	58			
	60	11:49 "	58			
	63	12:05 PM	55			
	66	12:39 "	58			
				(Average)	56.8	
Bottom	55	11:04 AM	58			
	58	11:30 "	55			
	61	11:50 "	58			
	64	12:10 PM	55			
	67	12:36 "	58			
				(Average)	55.6	56.5%
Ebb Current (W—E) Depth 1 FT	77	2:20 PM	79			
	80	2:39 "	79			
	83	2:57 "	79			
	86	3:16 "	79			
	89	3:35 "	79			
				(Average)	79.0	
Mid-depth	75	2:23 "	79			
	81	2:41 "	79			
	84	2:59 "	79			
	87	3:18 "	79			
	90	3:37 "	79			
				(Average)	77.0	
Bottom	79	2:24 "	74			
	82	2:43 "	74			
	85	2:51 "	74			
	88	3:10 "	74			
	91	3:29 "	74			
				(Average)	74.0	77.3
				(Average)	74.0	77.3
					72.9	72.0
						67%

DISPOSAL METHODS: Dilution
New York Harbor Dissolved Oxygen in P.M. EAST RIVER
Average % of Saturation from Cross Sections AT THROGS NECK

Date of Collection, Oct 25 1911 Time Geo I 20° AM

ANALYSIS
DISPOSAL METHODS - Dilution
New York Harbor Dissolved Oxygen in P.M. EAST RIVER 26 S
Average C.C. per liter. See Graph Section AT CLASON POINT TH 580
Temperature 60.4° Barometer 30.10 Time 6:30 AM
Wind W.N.E. Clouds Partly cloudy
Water Temperature 60.0° Depth 10 ft. Date June 30

Date of Collection: June 30 @ 6:30 AM HW 60.1 10°F AM LW 55°F PM

	Sample No	Time	Oxygen C.C. per Liter	AVERAGE S.C.C. per Liter		
				Each Current	All Depth	Both Currents All Depth
<u>Stand Current (down-->)</u>						
<u>Depth 1 ft.</u>	58	11:00 AM	3.43			
	59	11:15 "	3.43			
	60	11:45 "	3.11			
	61	12:00 PM	3.11	(Unsampled)		
	62	12:30 "	3.11	3.24		
<u>Mid-depth</u>	64	11:00 AM	3.43			
	65	11:15 "	3.43			
	66	11:45 "	3.11			
	67	12:00 PM	3.11	(Unsampled)		
	68	12:30 "	3.11	3.21		
<u>Bottom</u>	69	11:00 AM	3.11			
	70	11:15 "	3.11			
	71	11:45 "	3.11			
	72	12:00 PM	3.11	(Unsampled)		
	73	12:30 "	3.11	3.10		
<u>Up Current (down--<)</u>						
<u>Depth 1 ft.</u>	77	3:50	4.13			
	78	3:55	4.13			
	79	3:57	4.13			
	80	3:58	4.13	(Unsampled)		
	81	3:59	4.13	4.13		
<u>Mid-depth</u>	82	3:50	4.13			
	83	3:55	4.13			
	84	3:57	4.13			
	85	3:58	4.13	(Unsampled)		
	86	3:59	4.13	4.13		
<u>Bottom</u>	87	3:50	4.13			
	88	3:55	4.13			
	89	3:57	4.13			
	90	3:58	4.13	(Unsampled)		
	91	3:59	4.13	4.13		
	92	4:00	4.05			
	93	4:05	4.05			
	94	4:07	4.05			
	95	4:20	4.05	(Unsampled)		
	96	4:40	4.05	4.05	4.14	4.12

DOVER PHYSICAL DIVISION
 New York Harbor Dissolved Oxygen in the EAST RIVER
 Average Total Salinity from Four Sections At LAWRENCE Pt.
 46.00
 Sample No. 46-1 to 46-2
 Date Jan 3 1931

Date of Collection: July 10, 1931 Low Gage 1 7:15 AM High Gage 2 15:17 PM

Sample No.	Time	% of Salinity	Average Percent of Salinity		
			Each Depth	All Depths	Deviation v All Depth
<u>CLOUD CURRENT</u>					
Depth 1 ft					
416	10:10 AM	34%			
417	10:15	34			
418	10:40	34			
419	10:50	34			
420	10:55	34			
421	10:58 AM	34			
422	10:59	34			
423	10:59	34			
424	11:00	34			
425	11:00	34			
426	11:00	34			
427	11:00	34			
428	11:00	34			
429	11:00	34			
430	11:00	34			
431	11:00	34			
432	11:00	34			
433	11:00	34			
434	11:00	34			
435	11:00	34			
436	11:00	34			
437	11:00	34			
438	11:00	34			
439	11:00	34			
440	11:00	34			
441	11:00	34			
442	11:00	34			
443	11:00	34			
444	11:00	34			
445	11:00	34			
446	11:00	34			
447	11:00	34			
448	11:00	34			
449	11:00	34			
450	11:00	34			
451	11:00	34			
452	11:00	34			
453	11:00	34			
454	11:00	34			
455	11:00	34			
456	11:00	34			
457	11:00	34			
458	11:00	34			
459	11:00	34			
460	11:00	34			
<u>PLANKTON</u>			(Percent)		
461	10:10 AM	34			
462	10:15	34			
463	10:40	34			
464	10:50	34			
465	10:55	34			
466	10:58 AM	34			
467	10:59	34			
468	10:59	34			
469	11:00	34			
470	11:00	34			
471	11:00	34			
472	11:00	34			
473	11:00	34			
474	11:00	34			
475	11:00	34			
476	11:00	34			
477	11:00	34			
478	11:00	34			
479	11:00	34			
480	11:00	34			
481	11:00	34			
482	11:00	34			
483	11:00	34			
484	11:00	34			
485	11:00	34			
486	11:00	34			
487	11:00	34			
488	11:00	34			
489	11:00	34			
490	11:00	34			
491	11:00	34			
492	11:00	34			
493	11:00	34			
494	11:00	34			
495	11:00	34			
496	11:00	34			
497	11:00	34			
498	11:00	34			
499	11:00	34			
500	11:00	34			
501	11:00	34			
502	11:00	34			
503	11:00	34			
504	11:00	34			
505	11:00	34			
506	11:00	34			
507	11:00	34			
508	11:00	34			
509	11:00	34			
510	11:00	34			
511	11:00	34			
512	11:00	34			
513	11:00	34			
514	11:00	34			
515	11:00	34			
516	11:00	34			
517	11:00	34			
518	11:00	34			
519	11:00	34			
520	11:00	34			
521	11:00	34			
522	11:00	34			
523	11:00	34			
524	11:00	34			
525	11:00	34			
526	11:00	34			
527	11:00	34			
528	11:00	34			
529	11:00	34			
530	11:00	34			
531	11:00	34			
532	11:00	34			
533	11:00	34			
534	11:00	34			
535	11:00	34			
536	11:00	34			
537	11:00	34			
538	11:00	34			
539	11:00	34			
540	11:00	34			
541	11:00	34			
542	11:00	34			
543	11:00	34			
544	11:00	34			
545	11:00	34			
546	11:00	34			
547	11:00	34			
548	11:00	34			
549	11:00	34			
550	11:00	34			
551	11:00	34			
552	11:00	34			
553	11:00	34			
554	11:00	34			
555	11:00	34			
556	11:00	34			
557	11:00	34			
558	11:00	34			
559	11:00	34			
560	11:00	34			
561	11:00	34			
562	11:00	34			
563	11:00	34			
564	11:00	34			
565	11:00	34			
566	11:00	34			
567	11:00	34			
568	11:00	34			
569	11:00	34			
570	11:00	34			
571	11:00	34			
572	11:00	34			
573	11:00	34			
574	11:00	34			
575	11:00	34			
576	11:00	34			
577	11:00	34			
578	11:00	34			
579	11:00	34			
580	11:00	34			
581	11:00	34			
582	11:00	34			
583	11:00	34			
584	11:00	34			
585	11:00	34			
586	11:00	34			
587	11:00	34			
588	11:00	34			
589	11:00	34			
590	11:00	34			
591	11:00	34			
592	11:00	34			
593	11:00	34			
594	11:00	34			
595	11:00	34			
596	11:00	34			
597	11:00	34			
598	11:00	34			
599	11:00	34			
600	11:00	34			
601	11:00	34			
602	11:00	34			
603	11:00	34			
604	11:00	34			
605	11:00	34			
606	11:00	34			
607	11:00	34			
608	11:00	34			
609	11:00	34			
610	11:00	34			
611	11:00	34			
612	11:00	34			
613	11:00	34			
614	11:00	34			
615	11:00	34			
616	11:00	34			
617	11:00	34			
618	11:00	34			
619	11:00	34			
620	11:00	34			
621	11:00	34			
622	11:00	34			
623	11:00	34			
624	11:00	34			
625	11:00	34			
626	11:00	34			
627	11:00	34			
628	11:00	34			
629	11:00	34			
630	11:00	34			
631	11:00	34			
632	11:00	34			
633	11:00	34			
634	11:00	34			
635	11:00	34			
636	11:00	34			
637	11:00	34			
638	11:00	34			
639	11:00	34			
640	11:00	34			
641	11:00	34			
642	11:00	34			
643	11:00	34			
644	11:00	34			
645	11:00	34			
646	11:00	34			
647	11:00	34			
648	11:00	34			
649	11:00	34			
650	11:00	34			
651	11:00	34			
652	11:00	34			
653	11:00	34			
654	11:00	34			
655	11:00	34			
656	11:00	34			
657	11:00	34			
658	11:00	34			
659	11:00	34			
660	11:00	34			
661	11:00	34			
662	11:00	34			
663	11:00	34			
664	11:00	34			
665	11:00	34			
666	11:00	34			
667	11:00	34			
668	11:00	34			
669	11:00	34			
670	11:00	34			
671	11:00	34			
672	11:00	34			
673	11:00	34			
674	11:00	34			
675	11:00	34			
676	11:00	34			
677	11:00	34			
678	11:00	34			
679	11:00	34			
680	11:00	34			
681	11:00	34			
682	11:00	34			
683	11:00	34			
684	11:00	34			
685	11:00	34			
686	11:00	34			
687	11:00	34			
688	11:00	34			
689	11:00	34			
690	11:00	34			
691	11:00	34			
692	11:00	34			
693	11:00	34			
694	11:00	34			
695	11:00	34			
696	11:00	34			</

Under Difposal Methods Division
 New York Harbor Discharged Oxygen in 1931
 Average % of Saturation from Cross Sections
 Collected by G.L.H.
 Sample No. 205
 File No. 1H349
 Date June 3 1932

Date of Collection July 18, 1931 Low Gear 1.71 AM High Gear 1. 12.53 PM

Sample No	Time	% of Saturation	Average % of Saturation				
			Each Depth	All Depths	Average Current Depth		
<u>Flow Current (continued)</u>							
<u>Depth 1.5 ft. upstream</u>							
450	10:13 AM	59%					
451	10:14 -	58					
452	10:15 -	58					
453	10:16 -	58					
454	10:17 -	58					
455	10:18 -	58					
456	10:19 -	58					
457	10:20 -	58					
458	10:21 -	58					
459	10:22 -	58					
460	10:23 -	58					
461	10:24 -	58					
462	10:25 -	58					
463	10:26 -	58					
464	10:27 -	58					
465	10:28 -	58					
466	10:29 -	58					
467	10:30 -	58					
468	10:31 -	58					
469	10:32 -	58					
470	10:33 -	58					
471	10:34 -	58					
472	10:35 -	58					
473	10:36 -	58					
474	10:37 -	58					
475	10:38 -	58					
476	10:39 -	58					
477	10:40 -	58					
478	10:41 -	58					
479	10:42 -	58					
480	10:43 -	58					
481	10:44 -	58					
482	10:45 -	58					
483	10:46 -	58					
484	10:47 -	58					
485	10:48 -	58					
486	10:49 -	58					
487	10:50 -	58					
488	10:51 -	58					
489	10:52 -	58					
490	10:53 -	58					
491	10:54 -	58					
492	10:55 -	58					
493	10:56 -	58					
494	10:57 -	58					
495	10:58 -	58					
496	10:59 -	58					
497	10:59 -	58					
498	10:59 -	58					
499	10:59 -	58					
500	10:59 -	58					
501	10:59 -	58					
502	10:59 -	58					
503	10:59 -	58					
504	10:59 -	58					
505	10:59 -	58					
506	10:59 -	58					
507	10:59 -	58					
508	10:59 -	58					
509	10:59 -	58					
510	10:59 -	58					
511	10:59 -	58					
512	10:59 -	58					
513	10:59 -	58					
514	10:59 -	58					
515	10:59 -	58					
516	10:59 -	58					
517	10:59 -	58					
518	10:59 -	58					
519	10:59 -	58					
520	10:59 -	58					
521	10:59 -	58					
522	10:59 -	58					
523	10:59 -	58					
524	10:59 -	58					
525	10:59 -	58					
526	10:59 -	58					
527	10:59 -	58					
528	10:59 -	58					
529	10:59 -	58					
530	10:59 -	58					
531	10:59 -	58					
532	10:59 -	58					
533	10:59 -	58					
534	10:59 -	58					
535	10:59 -	58					
536	10:59 -	58					
537	10:59 -	58					
538	10:59 -	58					
539	10:59 -	58					
540	10:59 -	58					
541	10:59 -	58					
542	10:59 -	58					
543	10:59 -	58					
544	10:59 -	58					
545	10:59 -	58					
546	10:59 -	58					
547	10:59 -	58					
548	10:59 -	58					
549	10:59 -	58					
550	10:59 -	58					
551	10:59 -	58					
552	10:59 -	58					
553	10:59 -	58					
554	10:59 -	58					
555	10:59 -	58					
556	10:59 -	58					
557	10:59 -	58					
558	10:59 -	58					
559	10:59 -	58					
560	10:59 -	58					
561	10:59 -	58					
562	10:59 -	58					
563	10:59 -	58					
564	10:59 -	58					
565	10:59 -	58					
566	10:59 -	58					
567	10:59 -	58					
568	10:59 -	58					
569	10:59 -	58					
570	10:59 -	58					
571	10:59 -	58					
572	10:59 -	58					
573	10:59 -	58					
574	10:59 -	58					
575	10:59 -	58					
576	10:59 -	58					
577	10:59 -	58					
578	10:59 -	58					
579	10:59 -	58					
580	10:59 -	58					
581	10:59 -	58					
582	10:59 -	58					
583	10:59 -	58					
584	10:59 -	58					
585	10:59 -	58					
586	10:59 -	58					
587	10:59 -	58					
588	10:59 -	58					
589	10:59 -	58					
590	10:59 -	58					
591	10:59 -	58					
592	10:59 -	58					
593	10:59 -	58					
594	10:59 -	58					
595	10:59 -	58					
596	10:59 -	58					
597	10:59 -	58					
598	10:59 -	58					
599	10:59 -	58					
600	10:59 -	58					
601	10:59 -	58					
602	10:59 -	58					
603	10:59 -	58					
604	10:59 -	58					
605	10:59 -	58					
606	10:59 -	58					
607	10:59 -	58					
608	10:59 -	58					
609	10:59 -	58					
610	10:59 -	58					
611	10:59 -	58					
612	10:59 -	58					
613	10:59 -	58					
614	10:59 -	58					
615	10:59 -	58					
616	10:59 -	58					
617	10:59 -	58					
618	10:59 -	58					
619	10:59 -	58					
620	10:59 -	58					
621	10:59 -	58					
622	10:59 -	58					
623	10:59 -	58					
624	10:59 -	58					
625	10:59 -	58					
626	10:59 -	58					
627	10:59 -	58					
628	10:59 -	58					
629	10:59 -	58					
630	10:59 -	58					
631	10:59 -	58					
632	10:59 -	58					
633	10:59 -	58					
634	10:59 -	58					
635	10:59 -	58					
636	10:59 -	58					
637	10:59 -	58					
638	10:59 -	58					
639	10:59 -	58					
640	10:59 -	58					
641	10:59 -	58					
642	10:59 -	58					
643	10:59 -	58					
644	10:59 -	58					
645	10:59 -	58					
646	10:59 -	58					
647	10:59 -	58					
648	10:59 -	58					
649	10:59 -	58					
650	10:59 -	58					
651	10:59 -	58					
652	10:59 -	58					
653	10:59 -	58					
654	10:59 -	58					
655	10:59 -	58					
656	10:59 -	58					
657	10:59 -	58					
658	10:59 -	58					
659	10:59 -	58					
660	10:59 -	58					
661	10:59 -	58					
662	10:59 -	58					
663	10:59 -	58					
664	10:59 -	58					
665	10:59 -	58					
666	10:59 -	58					
667	10:59 -	58					
668	10:59 -	58					
669	10:59 -	58					
670	10:59 -	58					
671	10:59 -	58					
672	10:59 -	58					
673	10:59 -	58					
674	10:59 -	58					
675	10:59 -	58					
676	10:59 -	58					
677	10:59 -	58					
678	10:59 -	58					
679	10:59 -	58					
680	10:59 -	58					
681	10:59 -	58					
682	10:59 -	58					
683	10:59 -	58					
684	10:59 -	58					
685	10:59 -	58					
686	10:59 -	58					
687	10:59 -	58					
688	10:59 -	58					
689	10:59 -	58					
690	10:59 -	58					
691	10:59 -	58					
692	10:59 -	58					
693	10:59 -	58					
694	10:59 -	58					
695	10:59 -	58					
696	10:59 -	58					
697	10:59 -	58					
698	10:59 -	58					
699	10:59 -	58					
700	10:59 -	58					
701	10:59 -	58					
702	10:59 -	58					
703	10:59 -	58					
704	10:59 -	58					
705	10:59 -	58					
706	10:59 -	58					
707	10:59 -	58					
708	10:59 -	58					
709	10:59 -	58					
710	10:59 -	58					
711	10:59 -	58					
712	10:59 -	58					
713	10:59 -	58					
714	10:59 -	58					
715	10:59 -	58					
716	10:59 -	58					
717	10:59 -	58					
718	10:59 -	58					
719	10:59 -	58					
720	10:59 -	58					
721	10:59 -	58					
722	10:59 -	58					
723	10:59 -	58					
724	10:59 -	58					
725	10						

BEST DISPOSAL METHODS - Dilution
 New York Harbor Discharged Oxygen in 1931
 Average C.C. per Liter. from Cross Sections
 Call H.

Date No. 205
 EAST RIVER Act No. 1H381
 At Lawrence Pt. Water 1 in cross 2.
 Date Jan 10 '32

COPIED BY
 MADE IN FEDERAL BUREAU OF INVESTIGATION

CHIEFED BY

Date of Collection: July 16 1931 LWG, 17⁰AM HW 12⁰PM

Sample No.	Time	Oxygen CC per Liter	Averages C.C. per liter		
			Each Current		Both Currents All Depths
			Each Depth	All Depths	
<u>Flood Current</u>					
419	16 16 AM	3.24			
421	16 18 -	3.24			
424	16 45 -	3.24			
407	16 30 -	3.09			
430	11 23 -	3.09			
433	12 17 PM	3.09			
436	1.00 -	2.95			
439	1.13 -	2.95			
445	1.46 -	2.95			
443	2.80 -	2.95			
448	3.86 -	2.95			
451	3.10 -	2.95			
454	3.30 -	2.95			
457	3.49 -	2.95			
460	6.00 -	3.09			
<u>Mid-depth</u>					
419	16 17 AM	3.24			
425	16 24 -	3.24			
430	16 46 -	3.24			
438	11 31 -	3.09			
431	11 34 -	3.09			
436	12 18 PM	3.09			
437	1.01 -	2.95			
440	1.14 -	2.95			
443	1.47 -	2.95			
446	2.80 -	2.95			
449	3.81 -	2.95			
453	3.11 -	2.95			
457	3.46 -	2.95			
461	6.01 -	3.09			
<u>Bottom, see sheet 2</u>					
			3.05		
			3.09		

100
100
100

Subject: DISPOSAL METHODS- Dilution
New York Harbor Dissolved Oxygen in 19
Average C.C. per Liter, from Cross-Sections.

Average C.C. per Liter, from Cross-Sections

Average C.C. per liter, from Cross-Sections

COMPUTED BY *GARTH*

CHECKED BY

FILE NO 205
ACC NO 1H382
SHEET 2 Tot in Comp 2

Page 10

DATE Jan. 10

Date of Collection July 18, 1911 LW Gov I 7¹⁷AM H/12²²PM

	Sample No	Time	Oxygen CC per Liter	Averages CC per liter
				Ebb Current Both Ebb Depth All Deaths Currents? All Depths
<u>Flood Current</u>				
<u>Depth 1 FT see speat</u>				(5 samples) 3.04
<u>Mid-depth</u>	"			(5 samples) 3.05
<u>Bottom</u>				
420	10:18 AM	3.24		
423	10:26 "	3.24		
426	10:48 "	3.24		
429	11:33 "	3.09		
432	11:56 "	3.09		
435	12:20 PM	3.24		
438	1:03 "	2.95		
441	1:26 "	3.09		
444	1:49 "	3.69		
447	2:33 "	2.95		
450	2:53 "	2.95		
453	3:15 "	2.95		
456	3:33 "	2.98		
459	3:48 "	2.95		
462	4:03 "	3.09		
				(5 samples) (46 samples) 3.07 3.05
<u>Ebb Current, no sample taken</u>				

Water Depth & Dilution
 New York Harbor Dissolved Oxygen in 1911 EAST RIVER FILE NO. 205
 Storage % of Saturation from Cross Sections AT LAWRENCE Pt. SHEET 1 FOR IN COAR 2
 COMPUTER BY G.H. CHECKED BY DATE Jan 8 1912

MADE IN CONNECTION WITH

Date of Collection, Oct 11, 1911 HW Gov I 9:00 AM

	Sample No	Time	% of Saturation	Average Percent of Saturation			
				Each Current Depth	All Depths	Both Currents	All Depths
<u>Flood Current</u>							
Depth 1 ft	1894	7:50 AM	55%				
	1897	7:58 "	55				
	1900	8:06 "	56				
	1903	10:00 "	52				
	1906	10:08 "	52				
	1909	10:16 "	53				
	1912	12:00 M	51				
	1915	12:08 PM	51	(8 samples)			
	1918	12:16 "	52	53 0.0			
<u>Mid-depth</u>							
	1895	7:52 AM	55				
	1898	8:00 "	56				
	1901	8:08 "	56				
	1904	10:03 "	55				
	1907	10:10 "	57				
	1910	10:18 "	55				
	1913	12:02 PM	54				
	1916	12:10 "	56	(8 samples)			
	1919	12:18 "	55	55 3			
<u>Bottom</u>							
	1896	7:54 AM	55				
			Same as Mid-depth (8 samples)				
	1920	12:50 PM	55	55 3	54 5		
<u>Ebb Current</u> see sheet 2							
						Ex 74 1/32	

SUBJECT DISPOSAL METHODS Dilution
 New York Harbor Dissolved Oxygen in 1911 EAST RIVER ACC NO 1H368
 Average % of Saturation from Cross Sections ATLAWRENCE PONISHIER 2 in - core 2
 COMPUTER BY EAH CHECKED BY Date Jan 8 1932
 MADE IN COMPTON ON 1932

Date of Collection Oct 11 1911 HW Day I 9:00 AM

	Sample No	Time	% of Saturation	Averages		
				Percent of Saturation		Both Currents & All Depths
				Each Current	All Depths	
Flood Current, accurate						(27 samples) 54.5%
Ebb Current Depth 1 ft	1921	2:00 PM	55%			
	1924	2:08 "	55			
	1927	2:16 "	55			
	1930	4:08 "	59			
	1933	4:08 "	62			
	1934	4:16 "	60			
	1939	5:08 "	58			
	1942	5:08 "	62			
	1945	5:16 "	60			(8 samples) 58.6%
Mid-depth	1922	2:02 "	55			
	1935	2:10 "	57			
	1928	2:18 "	55			
	1931	4:02 "	62			
	1934	4:10 "	64			
	1937	4:18 "	63			
	1940	5:02 "	62			
	1943	5:10 "	64			(5 samples) 60.6%
	1946	5:18 "	63			
Bottom	1926	2:04 "	55			
		Same as Mid-depth				
	1947	5:20	63	60.6	59.9	(5 samples) 57%
						E 77 P 38

SUBJECT DISPOSAL METHODS- Dilution
 NEW YORK HARBOR Dissolved Oxygen in 1911 EAST RIVER
 Average C.C. per liter. from Cross-Sections AT LAWRENCE POINT
 COMPUTED BY Tellah. CHECKED BY _____
 MADE IN CONNECTION WITH SHEET 1 IN A SET OF 2.
 FILE NO. 205
 ACC. NO. 11405
 DATE Jan. 15 1912

Date of Collection: Oct 11 1911 HW Gr. I 9:00 AM

Sample No.	Time	Oxygen C.C. per Liter	Averages	
			Each Current	Both Currents
			Each Depth	All Depths
<u>Flood Current</u>				
<u>Depth 1 Ft</u>				
1894	7:50 AM	3.28		
1897	7:58 "	3.27		
1900	8:06 "	3.33		
1903	10:00 "	3.14		
1906	10:08 "	3.12		
1909	10:16 "	3.19		
1912	12:00 PM	3.14		
1915	12:08 PM	3.12 (6 samples)		
1918	12:16 "	3.19 3.20		
<u>Mid-depth</u>				
1895	7:52 AM	3.18		
1898	8:00 "	3.27		
1901	8:08 "	3.33		
1904	10:02 "	3.28		
1907	10:10 "	3.41		
1910	10:18 "	3.33		
1913	12:05 PM	3.28		
1916	12:16 "	3.41 (6 samples)		
1919	12:18 "	3.33 3.32		
<u>Bottom</u>				
1896	7:54 AM	3.18		
	Same as Mid-depth (6 samples)		
1920	12:20 PM	3.33 3.32 (7 samples)	3.28	
<u>Ebb Current see sheet 2</u>			Ex. 97	μ 33.

BIGEAD DISPOSAL METHODS - Dilution
NEW YORK HARBOR Dissolved Oxygen in 1911 **EAST RIVER** FILE NO. **205**
Average C.C. per Liter, from Gassy Sections **AT LAWRENCE POINT** ACC NO. **1H 406**
COMPUTED BY *ellm* **CHECKED BY** _____
NAME OR INSTITUTION WITH WHICH COMPUTED

SHEET 2 TO A COMB 2

DATE **Jan. 15** 1912Date of Collection, Oct. 11, 1911 HW Gov II 9 AM

Sample No	Time	Dissolved Oxygen C.C. per Liter	Averages C.C. per Liter		
			Each Current		Both Currents + All Depths
			Each Depth	All Depths	
<u>Flood Current, see sheet 1</u>					(21 samples) 3.28
<u>Ebb Current</u> <u>Depth 1 ft</u>	1921 2.00 PM 1924 2.08 " 1927 2.16 " 1930 4.00 " 1933 4.08 " 1936 4.16 " 1939 5.00 " 1942 5.08 " 1945 5.16 "	3.28 3.29 3.33 3.35 3.70 3.61 3.55 3.70 3.61			
<u>Mid-depth</u>	1922 2.02 " 1925 2.10 " 1928 2.18 " 1931 4.02 " 1934 4.10 " 1937 4.18 " 1940 5.08 " 1943 5.10 " 1946 5.18 "	3.18 3.41 3.33 3.69 3.84 3.75 3.69 3.84 3.75			(8 samples) 3.62
<u>Bottom</u>	1923 2.04 " 1926 2.12 " 1947 5.20 "	3.28 3.28 Mid depth (8 samples) 3.62	(27 samples) 3.58	(84 samples) 3.43	
			Ex 99	P 40	

~~9.000 DISSOLVED METERS~~ Dilution
NEW YORK HARBOR DISSOLVED OXYGEN IN 1934
Average % of Saturation from Cross Sections
COMPUTED BY L.C.H. CHECKED BY

MOUTH OF
EAST RIVER

FILE NO. 205
ACC. NO. 1H347
SHEET 1 TOT IN COMP. 2.
DATE Jan. 4, 1912

卷之三

© 2007 by Pearson Education, Inc.

Date of Collection July 27 1911 HW Gov I 9²⁶ AM LW Gov I 3⁴⁶ PM

SURVEY DISPOSAL METHODS Dilution
 New York Harbor Dissolved Oxygen in 1911 MOUTH OF
 Average % of Saturation from Cross Sections EAST RIVER
 COMPUTED BY LLH. CHECKED BY
 DATE Jan 4 1912
MAP IN CONNECTING SHEET

Date of Collection, July 27 1911 HWGav I 9²³ AM LWGav I 8²⁶ PM

	Sample No	Time	% of Saturation	Averages		
				Each Current Depth	All Depths	Both Currents & All Depths
<u>Flood Current</u> <small>see sheet 1</small>						56.9% <small>(6 samples)</small>
<u>Ebb Current</u>						
<u>Depth 1 Ft</u>	613	12.00 M	52%			
	616	12.08 PM	53			
	619	12.16 "	57			
	622	12.24 "	55			
	625	12.32 "	53			
	628	2.00-	49			
	631	2.08 "	51			
	634	2.16 "	54			
	637	2.24 "	52			
	640	2.32 "	50			52.6% <small>(6 samples)</small>
<u>Mid-depth</u>	614	12.01 "	52			
	617	12.09 "	53			
	620	12.17 "	60			
	623	12.25 "	58			
	626	12.33 "	53			
	629	2.01 "	49			
	632	2.09 "	51			
	635	2.17 "	56			
	638	2.25 "	52			
	641	2.33 "	50			53.4% <small>(6 samples)</small>
<u>Bottom</u>	615	12.03 "	52			
	618	12.11 "	53			
	621	12.19 "	60			
	624	12.27 "	58			
	627	12.35 "	53			
	630	2.03 "	49			
	633	2.11 "	51			
	636	2.19 "	56			
	639	2.27 "	52			
	642	2.35 "	50			53.4 <small>(6 samples)</small> 53.1 <small>(6 samples)</small> 55% <small>(6 samples)</small>
						Ex 59 P 42

DISPOSAL METHODS- DILUTION

New York Harbor Dissolved Copper in Fall
Average C.C. per Liter. Five ObservationsMOUTH OF
EAST RIVERCOMPUTED BY
W.H.H.

COMPUTED BY

POL No 205
 CASE NO 1H385
 BOTTLE 1 TOT IN CUP 2
 DATE Jan. 11 1921

Date of Collection July 27 1911 Harbor I 8:00 AM LIV 3:00 PM

	Sample No	Time	Oxygen C.C. per Liter	Averages C.C. per Liter		
				Each Current	All Depths	Both Currents & All Depths
<u>Flood Current</u>						
Depth 1 F.F.	598	9:30 AM	2.97			
	601	9:30 "	3.03			
	604	9:46 "	3.14			
	607	9:56 "	3.14			
	610	10:02 "	3.01	(Sampling)	3.08	
<u>Mid-depth</u>						
	599	9:31 "	2.97			
	602	9:38 "	3.03			
	605	9:47 "	3.38			
	608	9:59 "	3.29	(Sampling)		
	611	10:05 "	3.01	3.14		
<u>Bottom</u>						
	600	9:33 "	2.97			
	603	9:41 "	3.03			
	606	9:49 "	3.06			
	609	9:57 "	3.19	(Sampling)	(Sampling)	
	612	10:03 "	3.01	3.14	3.12	
<u>Ebb Current</u> See sheet 2						
				E = 99	P 4.2	

Subject: DISPOSAL METHODS - Dilution
 New York Harbor Dissolved Oxygen in 1911
 Average C.C. per Liter from Goss-Sections
 COMPUTED BY Colatt. Chlorometer
 Date No. 205
 Rec. No. 1H386
 Sheet 2, tot in Sheet 2.
 Date Jan. 11 1912

Date of Collection, July 27, 1911 HW 9:05 AM LW 3:25 PM

	Sample No.	Time	Oxygen CC per Liter	Average C.C. per Liter		
				Flood Current	Ebb Current	Both Currents at Depth
Flood Current, see sheet 1						(4 samples) 3.12
Ebb Current						
Depth (ft)						
613	12:00 P.	2.81				
616	11:45PM	3.90				
619	12:16 "	3.89				
622	12:24 "	3.80				
625	12:31 "	3.88				
628	2:09 "	3.70				
631	2:08 "	3.76				
634	2:16 "	3.85				
637	2:24 "	3.86				
640	2:33 "	3.74				
				(6 samples)	2.87	
Mid-depth						
614	12:01 "	2.81				
617	12:09 "	3.90				
620	12:17 "	3.84				
623	12:25 "	3.74				
626	12:33 "	3.88				
629	2:01 "	3.70				
632	2:09 "	3.76				
635	2:17 "	3.69				
638	2:25 "	3.86				
641	2:33 "	3.74				
				(4 samples)	2.91	
Bottom						
615	12:03 "	2.81				
				Same as		
				Mid-depth		
642	2:55 "	3.74		(4 samples)	2.90	(4 samples)

60-98 P 44

SUGAR DISPOSAL METHODS: Dilution

New York Harbor Dissolved Oxygen in Air

Average % of Saturation from Four Sections
Half.

MOUTH OF

EAST RIVER

Per cent 205

Acc no. 1H349

Date 1 rec in case 2.

Date Jan 4 rec 2.

Conducted by
Name or Organization

Conducted at

Date of Collection Aug. 3 1941 LW Gov I 9:07 AM HW Gov I 3:13 PM

	Sample No.	Time	% of Saturation	Averages		
				Percent of saturation		All Depths
				Each Current	Each Depth	
Ebb Current						
Depth 1 Ft	768	9:16 AM	50%			
	771	9:18 "	51			
	774	9:26 "	54			
	777	9:34 "	53	(5 samples)		
	780	9:42 "	52	51.6%		
Mid-depth	769	9:11 "	55			
	772	9:19 "	56			
	775	9:27 "	57			
	778	9:35 "	55	(5 samples)		
	781	9:43 "	53	55.2		
Bottom	770	9:13 "	55			
	779	9:21 "	56			
	776	9:29 "	57			
	779	9:37 "	55	(5 samples)	(5 samples)	
	782	9:45 "	53	55.7	54.6%	
Flood Current	2					
				C x 39	P 45	

Bureau of Marine Fisheries Division
 New York State University College at Albany
 Albany, New York, from time to time
 Sample No. 700-
 Date of Collection Aug. 3, 1942
 Location: Mouth of EAST RIVER
 Water depth: 6 ft. to 10 ft.
 Time of collection: 11:50 AM to 1:15 PM
 Date of analysis: Aug. 10, 1942
 Sample No. 610

Date of Collection Aug. 3, 1942 Time 11:50 AM to 1:15 PM

Sample No	Time	% of Salinity	Averages		
			Mean of Salinity Each Depth	All Depths	Bottom All Depths
<u>Ebb Current bottom</u>					
793	11:50 AM	54%			
794	12:15 PM	55			
795	12:15	56			
796	12:15	55			
797	12:15	50			
798	12:40	59			
801	2:40	60			
804	2:55	61			
807	3:05	60			
810	3:15	60	54.0% (averaged)	57.0%	
<u>Flood Current Depth 1 Ft.</u>					
764	11:50 AM	54			
767	12:45 PM	55			
790	12:15	56			
793	12:20	53			
794	12:20	53			
799	2:45	59			
802	2:45	60			
805	2:55	61			
808	3:05	60	(averaged)		
811	3:15	60	57.3		
<u>Mid depth</u>					
764	11:50 AM	54			
767	12:45 PM	55			
790	12:15	56			
793	12:35	55			
794	12:35	53			
797	12:35	53			
800	2:45	59			
803	2:55	60			
806	2:55	61			
809	3:05	60	(averaged)	(averaged)	
812	3:15	60	57.3	57.2	56.5
				Lx 99	P44

THE STATE OF NEW JERSEY ET AL.

104

Method: Dispersal Method: Dilution
 New York Harbor Dissolved Copper in PBI
 Average C.C. per liter. Two Gage Sections
 Location: 66th Street, Manhattan, N.Y.
 Date: June 11, 1914.

Method: P.F.
EAST RIVER

Date No. 205
 Acc No. IN387
 Layer 1 mi - 2 sec.
 Date Jun 11 1914

Date of Collection Aug 9, 1914 Length 2 9/16 in. NW 3¹⁰ PM

	Sample No	Time	Oxygen C.C. per Liter	Averages C.C. per liter		
				Each Current Depth	All Depths	Bath Current All Depths
<u>Lab Current</u>						
<u>Depth 17.1</u>	748	9:00 AM	2.70			
	757	9:18 "	2.76			
	754	9:26 "	2.93			
	777	9:34 "	2.86	2.86		
	780	9:42 "	2.76	2.80		
<u>Mud depths</u>						
	769	9:11 "	2.37			
	772	9:19 "	2.43			
	775	9:27 "	2.49			
	778	9:35 "	2.40	2.40	(Average)	
	781	9:43 "	2.45	2.49		
<u>Bottom</u>						
	779	9:18 "	2.47			
	773	9:21 "	2.43			
	776	9:29 "	2.49			
	779	9:37 "	2.40	2.40	(Average)	
	783	9:45 "	2.48	2.39	2.43	
<u>Flow Current</u> see next 2.						
					2.49	2.47

Method of Disposal Methods- Dilution
Alum-Tin Mixture Dissolved Copper in 1931
Average 1.1 per liter from Cross-Sections
Water Chlorine MOUTH OF EAST RIVER
 Date No. 205
 Acc No. 1H388
 Month 2, year 1931
 Year Jan 11
 Time 10:00 AM

Date of Collection Aug 3 1931 Low Sec I 07 AM Max 5:5 PM

Sample No.	Time	Oxygen CC per Liter	Average CC per Liter		
			Flood Current Each Depth	All Depths	Both Currents All Depths
(Low Current, no current)					(Average) 2.03
<u>Flood Current</u> <u>Depth 1 ft.</u>					
783	11:58 AM	2.97			
784	12:02 PM	3.03			
785	12:11 -	3.09			
786	12:19 -	3.00			
787	12:21 -	2.74			
788	12:28 -	2.24			
801	2:48 -	3.21			
804	2:56 -	5.30			
807	3:06 -	3.20	(Average) 3.20		
810	3:12 -	3.20	3.13		
<u>Mid-depths</u>					
784	11:56 AM	2.97			
787	12:04 PM	3.03			
788	12:12 -	3.09			
789	12:20 -	3.00			
796	12:28 -	2.09			
799	2:41 -	2.24			
802	2:48 -	3.81			
805	3:27 -	3.10			
808	3:45 -	3.29	(Average) 3.29		
811	3:52 -	3.20	3.13		
<u>Bottoms</u>					
783	11:58 AM	2.97			
812	3:47 PM	3.20	(Average) 3.12	(Average) 3.14	(Average) 3.04
			5.80	7.45	

THE STATE OF NEW JERSEY ET AL.

2045

DISPOSAL METHODS Distillation
 New York Harbor Discharged Ozone in 1911
Average % of Solutioin from Cross Sections
Bottom

MOUTH OF
EAST RIVER

FILE NO. 205
 REC'D NO. 1M36C
 SHEET 1 OF 2
 DATE JUN 6, 1912

CONTINUED ON

Date of Collection Sept 29 1911, Low tide 6:57 AM High tide 8:00 PM Low 7:27 PM

Sample No	Time	% of solution	AVERAGES		
			Each Current Depth	All Currents	Both All Depths
<u>Flood Current</u>					
1684	7:30 AM	69%			
1687	7:38	69			
1690	7:46	61			
1693	7:54	59			
1696	8:02	69			
1704	8:30 AM	61			
1707	8:38	52			
1710	8:46	54			
1713	8:54	53			
1716	8:53	53			
1719	6:02	48			
1722	6:04	52			
1725	6:12	54			
1728	6:20	58			
1731	6:27	49	Summary	51.0%	
<u>Mid-depth</u>					
1685	7:33 AM	81			
1688	7:40	81			
1691	7:48	54			
1694	7:56	53			
1697	8:04	52			
1700	8:32 PM	51			
1703	8:40	55			
1706	8:48	56			
1709	8:55	56			
1712	8:58	56			
1715	6:02	53			
1718	6:04	53			
1721	6:12	53			
1724	6:20	53			
1727	6:24	53			
1730	6:31	51			
1733	6:38	51	Summary	52.9	
<u>Bottom</u>					
1686	7:34 AM	51			
			Mean 52		
			Mid-depth (bottom) 52.0% (approx)		
1733	6:39 PM	52	52.9	53.3%	
			Gr. 59 P. 49		
<u>Flood Current</u> See sheet 2					

3
9
4
5

BURSEY DISPOSAL METHODS Dilution
 NEW YORK HARBOR Dissolved Oxygen in 1911 MOUTH OF
 Average % of Saturation - from Cross Sections EAST RIVER
 COMPUTER BY ELLIOTT CHECKED BY FILE NO. 205
 SHEET 2, TOT IN COOP. 2 ACC. NO. 1H 361
 DATE Jan 6 1912
MADE IN CONSTRUCTION WITH

Date of Collection, Sept 29, 1911 LW on 16th AM HW 12th PM LW 7th PM

	Sample No	Time	% of Saturation	Average s Percent of Saturation			
				Each Current Depth	All Depths	Both Currents =	All Depths
<u>Ebb Current, see sheet 1</u>							
						52.3%	(6 samples)
<u>Flood Current</u>							
	1699	9:30 AM	53%				
	1701	9:38	54				
	1705	9:46	56				
	1708	9:54	55				
	1711	10:02	48				
	1714	11:34 PM	55				
	1717	12:40	56				
	1720	12:49	59				
	1723	12:57	58				
	1726	1:05	54				
	1729	2:30	58				
	1732	2:38	59				
	1735	2:46	59				
	1738	2:54	58				
	1741	3:02	56			55.9%	
<u>Mid-depth</u>							
	1700	9:32 AM	55				
	1703	9:40	56				
	1706	9:48	56				
	1709	9:56	55				
	1712	10:04	51				
	1715	12:32 PM	58				
	1718	12:41	59				
	1721	12:51	59				
	1724	12:59	58				
	1727	1:07	56				
	1730	2:32	58				
	1733	2:40	59				
	1736	2:48	59				
	1739	2:56	58				
	1742	3:04	56			56.9	
<u>Bottom</u>							
	1701	9:34 PM	55				
			Same as				
			Mid-depth	(5 samples)	(4 samples)	(9 samples)	
	1743	3:06 PM	56	56.9	56.6	54.7	
				6.39	9.50		

SUBJECT: DISPOSAL METHODS- Dilution

NEW YORK HARBOR Dissolved Oxygen in 1911

Average C.C. per Liter, from Gages Sections

ALL H.

MOUTH OF

EAST RIVER

FILE NO. 205

ACC. NO. 398

Sheet 1 Tot. in Case 2

Date JUN 12 1912

COMPUTED BY

CHECKED BY

WATER & POWER BUREAU

Date of Collection, Sept 29, 1911 LWGage I 4:27 AM HW 12:27 PM LW 7:27 PM

	Sample No	Time	Oxygen C.C. per Liter	Averages C.C. per Liter			
				Each Current		Both Currents	
				Each Depth	All Depths	Currents	All Depths
<u>Ebb Current</u>							
<u>Depth 1 ft</u>	1684	7:30 AM	2.73				
	1687	7:38 "	2.80				
	1690	7:46 "	2.92				
	1693	7:54 "	2.84				
	1696	8:02 "	2.79				
	1744	4:30 PM	2.87				
	1747	4:36 "	2.94				
	1750	4:46 "	2.84				
	1753	4:54 "	3.00				
	1756	5:02 "	2.82				
	1759	6:00 "	2.73				
	1762	6:06 "	2.94				
	1765	6:13 "	3.04				
	1768	6:20 "	3.00	(Excluded)			
	1771	6:27 "	2.79	2.89			
<u>Mid-depth</u>							
	1685	7:32 AM	2.87				
	1688	7:40 "	2.94				
	1691	7:48 "	3.04				
	1694	7:56 "	3.00				
	1697	8:04 "	2.92				
	1745	4:32 PM	2.87				
	1748	4:40 "	3.08				
	1751	4:48 "	3.15				
	1754	4:56 "	3.12				
	1757	5:04 "	2.92				
	1760	6:01 "	2.87				
	1763	6:07 "	2.94				
	1766	6:14 "	3.04				
	1769	6:21 "	3.00	(Excluded)			
	1772	6:28 "	2.92	2.98			
<u>Bottom</u>							
	1686	7:36 AM	2.87				
				Same as			
				Mid depth			
	1773	6:30 PM	2.82	2.98	2.95		
				Excluded	P. 51		
<u>Flood Current, see sheet 2</u>							

BURDEN DISPOSAL METHODS - Dilution
 NEW YORK HARBOR Dissolved Oxygen in 1911
 Average C.C. per Liter, from Cross-Sections
 COMPUTED BY *Alth.* CHECKED BY *[Signature]*

No. 205
ACC NO. IH399

MOUTH OF
EAST RIVER

Sheet 2 (in 4) - Color 2

Date Jun 12 '12

Date of Collection, Sept 29 1911 LW Gv I 6:27 AM HW 12:27 PM LW 7:27 PM

	Sample No	Time	Oxygen C.C. per Liter	Average C.C. per Liter		
				Each Current	All Depths	Both Currents & All Depths
Ebb Current (see chart)						2.95 (5 samples)
Flood Current Depth 1 ft	1709	9:30 AM	3.01			
	1702	9:38 "	3.00			
	1705	9:46 "	3.19			
	1708	9:54 "	3.17			
	1711	10:02 "	2.73			
	1714	12:34 PM	3.14			
	1717	12:46 "	3.19			
	1720	12:49	3.33			
	1723	12:57 "	3.17			
	1726	1:05 "	3.06			
	1729	2:30 "	3.26			
	1732	2:38 "	3.31			
	1735	2:46 "	3.33			
	1738	2:54 "	3.27			
	1741	3:02 "	3.19			3.17
Mid-depth	1708	9:35 AM	3.14			
	1703	9:40 "	3.19			
	1706	9:48 "	3.19			
	1709	9:56 "	3.12			
	1712	10:04 "	2.93			
	1715	12:32 PM	3.26			
	1718	12:42 "	3.34			
	1721	12:51 "	3.33			
	1724	12:59 "	3.17			
	1727	1:07 "	3.19			
	1730	2:32 "	3.28			
	1733	2:40 "	3.26			
	1736	2:48 "	3.35			
	1739	2:56 "	3.27			
	1742	3:04 "	3.13			3.23
Bottom	1701	9:34 AM	3.14			
			Sum. 64			
			Mid-depth (64 samples)			
	1743	3:06 PM	3.19			
			Ex. 39			
			7.52			
						3.08

SUBJECT DISPOSAL METHODS Dilution

NEW YORK HARBOR Dissolved Oxygen in 1911

Average % of Saturation - from Cross Sections

Bottom

EAST END OF

KILL VAN KULL

SHEET 1 FOR IN COVE 2

FILE NO.

205

ACC. NO.

1H362

DATE

Jan 8 192

COMPUTED BY

CHECKED BY

MADE IN CONNECTION WITH

Date of Collection Oct. 4 1911

HW Gevl 5:3 AM LW 11:3 AM HW 5:2 PPM

Sample No.	Time	% of Saturation	Averages		
			Each Current	All Depths	Both Currents & All Depths
<u>Flood Current</u>					
1774	7:30 AM	69%			
1777	7:39 "	71			
1780	7:48 "	70			
1801	1:30 PM	69			
1804	1:39 "	71			
1807	1:48 "	75			
1810	3:30 "	70			
1813	3:39 "	72			
1816	3:48 "	73			
1819	5:30 "	73			
1822	5:39 "	77			
1825	5:48 "	78	72.5%		
<u>Mid-depth</u>					
1775	7:33 AM	74			
1778	7:41 "	76			
1781	7:50 "	75			
1802	1:39 PM	73			
1805	1:41 "	76			
1808	1:50 "	77			
1811	3:32 "	76			
1814	3:41 "	77			
1817	3:50 "	76			
1820	5:32 "	80			
1823	5:41 "	82	(2 samples)		
1826	5:50 "	81	76.9		
<u>Bottom</u>					
1776	7:34 AM	79			
1779	7:42 "	81			
1782	7:51 "	80			
1803	1:34 PM	73			
1806	1:43 "	76			
1809	1:52 "	77			
1812	3:34 "	76			
1815	3:43 "	77			
1818	3:52 "	73			
1821	5:34 "	80			
1824	5:43 "	82	(2 samples)	(16 samples)	
1827	5:52 "	81	779	75.8%	

C. 99 P. 33

SOURCE: DISPOSAL METHODS - Dilution
 NEW YORK HARBOR Dissolved Oxygen in 1911 EAST END OF
 Average % of Saturation from Cross Sections KILL VAN KULL
Beaufort
 COMPUTER BY C. H. R. 1911
 DATE OF COLLECTION WITHIN

FILE NO. 205
 REC'D. NO. 1H363
 SHEET 2 TOTAL COUP 2.
 DATE JUN 8 1911

Date of Collection, Oct 4 1911 HWGv I 5²³ AM LWH 7 AM HWG 2⁰ PM

	Sample No	Time	% of Saturation	AVERAGE PERCENT OF SATURATION		
				Each Current	Both Currents	All Depths
<u>Flood Current, see sheet 1</u>				(6 samples)	75.8%	
<u>Ebb Current</u> <u>Depth 1 ft</u>	1783	9:30 AM	73			
	1786	9:39 "	75			
	1789	9:48 "	74			
	1791	10:30 "	68			
	1795	11:39 "	71	(6 samples)		
	1798	11:48 "	70	(6 samples)	71.8%	
<u>Mid-depth</u>	1784	9:32 "	73			
	1787	9:41 "	75			
	1790	9:50 "	76			
	1793	11:32 "	73			
	1796	11:41 "	74	(6 samples)		
	1799	11:50 "	74	(6 samples)	74.8	
<u>Bottom</u>	1785	9:34 "	73			
	1788	9:43 "	75			
	1791	9:51 "	76			
	1794	11:34 "	73			
	1797	11:43 "	76	(6 samples)	(6 samples)	(6 samples)
	1800	11:52 "	74	74.5	73.6	75.7%
				In 99	P. 54	

SUBJECT DISPOSAL METHODS- Dilution
 New York Harbor Dissolved Oxygen in 1931
 Average C.C. per Liter, from Cross-Sections
EAST END OF KILL VAN KULL

PLATE NO.	205
DATE NO.	1M 400
SHEET NO.	1 (or in Case 2)
DATE	JAN 13 1932

COMPUTED BY Tellah CHECKED BY _____

Date of Collection OCT 4 1931

HWG 1 5 AM LWH 9 AM MW 3 PM

	Sample No.	Time	Oxygen C.C. per Liter	Averages C.C. per Liter		
				Each Current Depth	All Depths	Both Currents & All Depths
<u>Flood Current Depth 1 ft</u>						
	1774	7:30 AM	4.10			
	1777	7:39 -	4.20			
	1780	7:48 -	4.17			
	1801	1:30 PM	4.10			
	1804	1:39 -	4.24			
	1807	1:48 -	4.44			
	1810	3:30 -	4.10			
	1813	3:39 -	4.17			
	1816	3:48 -	4.36			
	1819	5:30 -	4.39			
	1822	5:39 -	4.44	(sampled)		
	1825	5:48 -	4.54		4.26	
<u>Mid-depth</u>						
	1775	7:33 AM	4.28			
	1778	7:41 -	4.69			
	1781	7:50 -	4.44			
	1802	1:31 PM	4.38			
	1805	1:41 -	4.55			
	1808	1:50 -	4.58			
	1811	2:01 -	4.38			
	1814	3:41 -	4.44			
	1817	3:50 -	4.40			
	1820	5:33 -	4.65			
	1823	5:41 -	4.73	(sampled)		
	1826	5:50 -	4.69		4.51	
<u>Bottom</u>						
	1776	7:34 AM	4.45			
	1779	7:43 -	4.78			
	1782	7:52 -	4.17			
	1803	1:34 PM	4.38			
	1806	1:43 -	4.55			
	1809	1:51 -	4.58			
	1812	3:34 -	4.38			
	1815	3:43 -	4.44			
	1818	5:31 -	4.16			
	1821	5:34 -	4.65	(sampled)		
	1824	5:43 -	4.73	(sampled)	4.57	4.45
	1827	5:53 -	4.69			

6.39 P.M.

SUBJECT DISPOSAL METHODS- Dilution
 New York Harbor Dissolved Oxygen in 1911 EAST END OF
 Average C.C. per Liter. from Four Sections KILL VAN KULL
 COMPUTED BY Bell CHECKED BY
 DATE OF COMPUTATION AND CHECKING
 FILE NO. 20.5
 REC. NO. IH 401
 SHEET 2. Ver. in Case 3.
 DATE Jan. 13 1912.

Date of Collection, Oct 4, 1911 HwGeo I. 5:00AM LWN/AM HWS/PM

	Sample No	Time	Oxygen C.C. per Liter	Averages C.C. per Liter		
				Each Current		Bath
				Each Depth	All Depths	Currents All Depths
<u>Flood Current</u>						(6 samples) 4.45
<u>Ebb Current</u>						
Depth 1 Ft.	1783	9:30AM	4.38			
	1784	9:35 -	4.4			
	1785	9:45 -	4.44			
	1792	11:30 -	4.10			
	1795	11:39 -	4.36	(6 samples)		
	1798	11:48 -	4.17			4.30
<u>Mid-depth</u>						
	1784	9:32 -	4.38			
	1787	9:41 -	4.49			
	1790	9:50 -	4.58			
	1793	11:33 -	4.38			
	1796	11:41 -	4.56	(6 samples)		
	1799	11:50 -	4.64			4.47
<u>Bottom</u>						
	1785	9:34 -	4.38			
				Bottom 4.4		
				Mid-depth (6 samples)		
	1800	11:52 -	4.44			
				4.47		
				5.99		
				7.04		
						4.43

Water Disposal Measurements - Dissolution
 NEW YORK HARBOR DISSOLVED OXYGEN IN 1911
 Average % of Saturation from Cross Sections

COMPUTED BY *Leach*

CHARTED BY

THE
NARROWS

POL NO 205
 ACC NO 1H351
 SURVEY FOR NO. 2
 DATE Jan 4, 1911

Date of Collection Aug. 9, 1911 HW Gav I 7:57 AM LW Gav I 1:27 PM

	Sample No.	Time	% of Saturation	Average % Percent of Saturation		
				Each Current		Both Currents to All Depths
				Each Depth	All Depths	
<u>Ebb Current</u>						
<u>Depth 1 ft</u>						
	876	9:40 AM	74%			
	879	9:58 "	76			
	881	10:08 "	76			
	885	11:40 "	64			
	888	12:00 PM	66			
	891	12:10 PM	65			
	894	1:18 "	64			
	897	1:20 "	67			
	900	1:38 "	66	(8 samples)		
					68.7%	
<u>Mid-depth</u>						
	877	9:12 AM	79			
	880	9:52 "	81			
	883	10:02 "	82			
	886	11:42 "	69			
	889	12:02 PM	69			
	892	12:12 "	71			
	895	1:12 "	70			
	898	1:22 "	69			
	901	1:32 "	69	(8 samples)		
					73.3	
<u>Bottom</u>						
	878	9:44 AM	73			
	881	9:56 "	82			
	884	10:04 "	82			
	887	11:44 "	69			
	890	12:04 "	69			
	893	12:14 "	71			
	896	1:14 "	70			
	899	1:24 "	69	(8 samples)	(7 samples)	
	902	1:34 "	69		73.3	71.8%
<u>Flood Current</u>	<u>no samples taken</u>			<u>Ex 93</u>	<u>P 57</u>	

Method: DISPOSAL METHODS- Dilution
 New York Harbor Dissolved Copper in P.M.
 Average C.C. per liter. from Cross-Sections
 COMPUTED BY W.H.

THE
NARROWS

Pt. no. 205
 Sec. no. 1H 389
 Date Jan 11 1915

Date of Collection Aug. 9 1911. Range: 1.78 AM LW 28' PP

	Sample No	Time	Dissolved Oxygen CC per Liter	Averages C.C. per Liter		
				Each Current Depth	All Depths	Bath Currents All Depths
<u>ebb current</u>						
Depth 1FT	876	8.46 AM	4.02			
	879	9.00 "	4.00			
	880	10.00 "	4.01			
	881	11.00 "	3.45			
	882	12.00 PM	3.97			
	883	13.00 PM	3.93			
	884	14.00 "	3.43			
	887	15.00 "	3.07	(Sampling)		
	888	1.30 "	3.53	3.70		
<u>Mid depth</u>						
	877	9.42 AM	4.24			
	880	9.50 "	4.18			
	883	10.00 "	4.02			
	884	11.00 "	3.78			
	885	12.00 PM	3.78			
	886	13.15 "	3.83			
	887	13.15 "	3.78			
	888	1.30 "	3.78	(Sampling)		
	889	1.30 "	3.48	3.95		
<u>Bottom</u>						
	878	9.46 AM	4.06			
				4.00 ± 0.05		
				Middle depth	(Sampling)	(Sampling)
	882	1.30 PM	3.68	3.93	3.84	
<u>Flood Current</u> , 10.30 AM 11.00 PM						
				6.92	6.76	

DISPERSAL METHODS: Dissolution
 New York Harbor Dissolved Oxygen in PPM
 Average % of Saturation from Cross Section
 Sample No. 1474-1518
 Date Collected Sept. 26, 1951

THE
NARROWS

Date No. 205
 Sample No. 1H564
 Month Jan. 3
 Year Jan. 5

Date of Collection Sept. 26, 1951 LWGon 140 AM HWDAM LWGZPM

	Sample No	Time	% of Saturation	Average % Percent of Saturation		
				Each Current Depth	All Depths	Bath Correction All Depths
Flood Current Depth 1 Ft	1474	6:30 AM	65%			
	1477	6:39 -	67			
	1480	6:48 -	69			
	1483	6:57 -	68			
	1486	7:06 -	66			
	1489	8:30 -	83			
	1492	8:39 -	85			
	1495	8:48 -	85			
	1498	9:57 -	86			
	1501	9:56 -	84			
	1504	10:50 -	85			
	1507	10:59 -	87			
	1510	10:48 -	88			
	1513	10:57 -	89	(Same as)		
	1516	11:06 -	89	78.7%		
Mid-depth	1475	6:38 -	68			
	1478	6:41 -	70			
	1481	6:39 -	70			
	1484	6:59 -	68			
	1487	7:08 -	69			
	1490	8:34 -	89			
	1493	8:41 -	91			
	1496	8:50 -	81			
	1509	8:39 -	86			
	1502	9:08 -	90			
	1505	10:31 -	89			
	1508	10:51 -	91			
	1511	10:50 -	89			
	1514	10:59 -	90	(Same as)		
	1517	11:08 -	90	83.9		
Bottom	1476	6:34 -	68			
	1479	-	Same as			
	etc.	-	Mid-depth			
	1515	-		(Same as Mid-depth)		
	1518	11:10 -	90	82.9	81.0%	

ANALYST: D. PEARL, METHODS: Dissolution
 New York Harbor: Dissolved Oxygen in 1931
 Average % of Saturation from Cross Sections
 60 ft.
 COMPUTED BY: C. H. COOPER
 APPROVED BY: J. R. COOPER
 Date No. 205
 Rec'd No. 1935
 Date 2 hr. at 8 AM Jan 3
 Depth 0 to 100 ft.
 No. 1

Date of Collection Sept 26, 1931 L.W.G. 1:47 AM 50° 10' F 50° 10' F 50° 10' F

	Sample No	Time	% of Saturation	Average % of Saturation		
				Each Current	All Depths	Both Currents & All Depths
<u>Low Current</u>	1519	12:30 PM	85%			
<u>Depth 15'</u>	1519	12:30 -	87			
	1520	12:45 -	85			
	1521	12:57 -	85			
	1522	1:04 -	84			
	1523	2:56 -	77			
	1527	3:39 -	78			
	1540	3:48 -	77			
	1543	3:57 -	75			
	1544	3:58 -	77			
	1545	4:30 -	70			
	1552	4:39 -	75			
	1553	4:48 -	75			
	1558	4:57 -	70			
	1561	5:06 -	69			
	1564	6:40 -	65			
	1567	6:48 -	67			
	1570	6:54 -	69			
	1573	6:54 -	68			
	1574	6:52 -	66	75.0%		
			65.9%	75.0%		

Water Dissolved Minerals - Dissolved
New York Harbor Dissolved Oxygen in P.M.
Average Total Dissolution - from Cross Sections
COMPUTED BY Smith CHECKED BY
FILE NO. 205
DATE NO. 111356
SHEET 3 OF 3 - COLOR 3
DATE Jan 5 1953

Date of Collection Sept 26, 1911 LWG on 14th AM HW 10th AM LW 4th PM

SUBJECT: DISPOSAL METHODS- Dilution
 New York Harbor Dissolved Oxygen in 1911
 Average C.C. per Liter. from Cross-Sections
 COMPUTED BY ell.H.

THE
NARROWS

PIN NO 205
 ACC. NO 1H393
 SHEET 2 TOT IN COUP. 3
 DATE Jun 12 1912

MADE IN CONNECTION WITH

Date of Collection, Sept 26 1911 LWGev I 4¹⁷AM HW 10²³AM LW 4²⁷PM

	Sample No.	Time	Oxygen C.C. per Liter	Averages C.C. per Liter		
				Each Current		Both Currents & All Depths
				Each Depth	All Depths	
<u>Ebb Current</u>						
Depth 1 Ft	1519	1230PM	4.78			
	1522	1239 "	4.90			
	1525	1248 "	4.78			
	1528	1257 "	4.85			
	1531	1 06 "	4.72			
	1534	2 30 "	4.38			
	1537	2 39 "	4.48			
	1540	2 48 "	4.34			
	1543	2 57 "	4.26			
	1546	3 06 "	4.31			
	1549	4 30 "	3.96			
	1552	4 39 "	4.04			
	1555	4 48 "	4.06			
	1558	4 57 "	3.98			
	1561	5 06 "	3.95			
	1564	6 00 "	3.69			
	1567	6 08 "	3.78			
	1570	6 16 "	3.91			
	1573	6 24 "	3.84	(20 samples)		
	1576	6 32 "	3.75	4.24		
				2 x 49	P 63	

SUBJECT: DISPOSAL METHODS- Dilution
 NEW YORK HARBOR Dissolved Oxygen in 1911
 Average C.C. per Liter, from Gross Sections
 COMMUNICATED BY: TELLER. CHECKED BY:

PAGE NO. 205
 ACC. NO. 1H 394
 SHEET 3 TO INCL. 3
 DATE JUN 12 1912

MAILED OR TRANSMITTED WITH

Date of Collection Sept 20 1911 LWGex I 4¹⁷ AM HW 10³² AM

	Sample No	Time	Oxygen C.C. per Liter	Averages C.C. per Liter		
				Each Current		Bottom Currents All Depths
				Each Depth	All Depths	
Flood Current see sheet 1						(65 samples) 4.57
Ebb Current Depth 1 Ft. see sheet 2						(60 samples) 4.24
Mid-depth	1520	12.32 PM	4.78			
	1525	12.41 "	4.90			
	1526	12.50 "	4.91			
	1519	12.59 "	4.93			
	1532	1.08 "	4.87			
	1535	2.32 "	4.51			
	1538	2.41 "	4.48			
	1541	2.50 "	4.34			
	1544	2.59 "	4.26			
	1547	3.68 "	4.81			
	1550	4.3 -	3.96			
	1553	4.41 "	4.06			
	1556	4.50 "	4.06			
	1559	4.59 "	3.98			
	1562	5.08 "	4.0			
	1565	6.02 "	3.83			
	1568	6.10 "	3.92			
	1571	6.18 "	4.06			
	1574	6.26 "	3.98			
	1577	6.34 "	3.89			
Bottom	1521	12.34 "	4.78			
			Same as 1520			
			Mid-depth	(60 samples)	(60 samples)	(60 samples)
	1578	6.36 "	3.89	4.30	4.28	4.42
				6.44	6.64	

SUBJECT DISPOSAL METHODS Dilution

NEW YORK HARBOR Dissolved Oxygen in 1911. UPPER BAY File No. 205

Average % of Saturation - f Acc No. JH 373

Average % of Saturation - f NEAR ROBBING REEF Sheet 1 for in sheet 2.

E.A.H.

COMPUTED BY CHECKED BY

Date Jan 9 1923

MADE IN CONVENTION WITH

Date of Collection Oct 16, 1911

LV/Gov I 8:00 AM HW 3:00 PM

	Sample No	Time	% of Saturation	Averages		
				Percent of Saturation Each Current	Both Depth	All Currents All Depth
<u>Ebb Current</u>						
Depth 1 Ft.						
	2038	9:20 AM	64%			
	2041	9:35 "	64			
	2044	9:30 "	65			
	2047	11:20 "	65			
	2050	11:35 "	66	(Sampling)		
	2053	11:50 "	66	65.0%		
<u>Mid-depth</u>						
	2039	9:12 "	65			
	2042	9:37 "	68			
	2045	9:52 "	66			
	2048	11:12 "	65			
	2051	11:37 "	66	(Sampling)		
	2054	11:52 "	66	66.0		
<u>Bottom</u>						
	2040	9:25 "	65			
			Same as			
			Mid-depth	(Sampling)	(Sampling)	
	2055	11:55 "	66	66.0	65.7%	
<u>Flood Current</u> see sheet 2				Z 90	P 65	

BUDGET DISPOSAL METHODS Dilution
 New York Harbor Dissolved Oxygen in 1911 FILE NO. 205
 Average % of Saturation - from Cross Sections UPPER BAY ACC. NO. 1H374
NEAR ROBBINS REEF SHEET 2 TOT. IN CUST. 2
E.A.H. CHECKED BY
 COMPUTED BY DATE Jan 9 1912
 MADE IN CONSULTATION WITH

Date of Collection Oct 16, 1911 LW Gov I 9:00 AM HW 3:00 PM

	Sample No.	Time	% of Saturation	Averages Percent of Saturation		
				Each Current		Both Currents & All Depths
				Each Depth	All Depths	
<u>Ebb Current, seaboard 1</u>						(4 samples) 65.7%
<u>Flood Current</u> <u>Depth 1 Ft</u>	2056	1:20 PM	68%			
	2059	1:35	66			
	2062	1:50	70			
	2065	3:20	76			
	2068	3:35	75			
	2071	3:50	76			
	2074	5:10	77			
	2077	5:18	75			
	2080	5:24	75			
						75.1%
<u>Mid-depth</u>	2057	1:22	77			
	2060	1:37	73			
	2063	1:52	76			
	2066	3:22	77			
	2069	3:37	76			
	2072	3:52	77			
	2075	5:12	78			
	2078	5:20	79			
	2081	5:28	77			
						76.7
<u>Bottom</u>	2058	1:35	77			
	2082	5:30	77			
				Same as Mid-depth	(4 samples)	(12 samples) (45 samples)
					76.7	75.5
						71.7

See 205
1H255 for sketch showing locations where samples were taken
 E. 99 P. 46

SUBJECT DISPOSAL METHODS- Dilution
 New York Harbor Dissolved Oxygen in 1911
 Average C.C. per Liter.
 COMPUTED BY ELL H. CHECKED BY _____
 File No. 205
 Acc. No. 111411
 SHEET 1 FOR SHEET 2.
 DATE Jan 15 1912

Date of Collection, Oct. 16 1911 LW Gov I 9:05 AM HW 3:00 PM.

	Sample No	Time	Oxygen C.C. per Liter	Average C.C. per Liter		
				Each Current		Both Currents All Depths
				Each Depth	All Depths	
<u>Ebb Current</u>						
<u>Depth 1 FT</u>	2038	9:20 AM	3.96			
	2041	9:35 -	3.98			
	2044	9:50 -	4.03			
	2047	11:20 -	4.10			
	2050	11:35 -	4.12	(6 samples)		
	2053	11:50 -	4.17		4.06	
<u>Mid-depth</u>						
	2039	9:22 -	3.96			
	2042	9:37 -	4.12			
	2045	9:52 -	4.03			
	2048	11:22 -	3.96			
	2051	11:37 -	3.98	(6 samples)		
	2054	11:52 -	4.03		4.01	
<u>Bottom</u>						
	2040	9:25 -	3.96			
			
				
	2055	11:55 -	4.03	(6 samples)	4.01	4.03
<u>Flood Current, see sheet 2</u>				6.49	6.67	

SUBJECT: DISPOSAL METHODS- Dilution
 New York Harbor Dissolved Oxygen in 1911
 Average C.C. per Liter.
 COMPUTED BY *Tellah.* CHECKED BY _____
 File No. 20.5
 REC. NO. 11412
 NEAR RUBBIN REEF SHEET 2 TYP. IN OCEAN 2.
 Date Jun 15 1912

Date of Collection, Oct 16 1911 L.W.Gov I. 9th AM HW 3rd PM

	Sample No	Time	Oxygen C.C. per Liter	Averages C.C. per liter	
				Each Current Depth	Both Currents All Depths
<u>Ebb Current see sheet 1</u>				(Sampling) 4.06	
<u>Ebb Current Depth 1 ft</u>	2056	1:10 PM	4.14		
	2059	1:35 "	4.14		
	2062	1:50 "	4.31		
	2065	3:20 "	4.45		
	2068	3:35 "	4.55		
	2071	3:50 "	4.58		
	2074	5:10 "	4.65		
	2077	5:18 "	4.55	(Sampling)	
	2080	5:26 "	4.53	4.47	
<u>Mid-depth</u>	2057	1:32 "	4.65		
	2060	1:37 "	4.40		
	2063	1:52 "	4.38		
	2066	3:23 "	4.65		
	2069	3:37 "	4.55		
	2072	3:52 "	4.58		
	2075	5:12 "	4.65		
	2078	5:20 "	4.68	(Sampling)	
	2081	5:28 "	4.58	4.59	
<u>Bottom</u>	2058	1:25	4.65		
	2082	5:30	4.58	(Sampling) 4.59 (Sampling) 4.55 (Sampling) 4.29 Ex. 97 1.68	

SAMPLING DISPOSAL METHODS: Dilution

NEW YORK HARBOR Dissolved Oxygen in 1911

Average % of Saturation:

E.A.H.

UPPER BAY

FILE NO.

205

ACQ. NO.

1M375

NEAR ROBBINS RIVER

STATION

TIDE IN FEET

COMPUTED BY
DATE OF COMPUTATION 1911

CHARTED BY

DATE

Jan 9

1912

Date of Collection Oct 23 1911 HW 0017 8:37 AM LW 2187 PM.

	Sample No.	Time	% of Saturation	Averages		
				Each Current Depth	All Depths	Both Currents & All Depths
<u>Flood Current</u>						
<u>Depth 1 ft</u>						
	2083	9:30 AM	78%			
	2086	9:45 -	74			
	2089	10:00 -	77			
	2092	10:15 -	78			
<u>Mid-depth</u>						
	2084	9:30 -	75			
	2087	9:45 -	76			
	2090	10:00 -	78			
	2093	10:15 -	80			
<u>Bottom</u>						
	2086	9:30 -	75			
	2089	9:45 -	77			
	2091	10:00 -	79			
	2094	10:15 -	80			
<u>Ebb Current</u>						
<u>Depth 1 ft</u>						
	2108	12:30 PM	64			
	2101	12:45 -	67			
	2104	1:00 -	73			
	2107	1:15 -	74			
	2113	1:30 -	69			
	2116	1:45 -	69			
	2119	2:00 -	67			
	2122	2:15 -	66			
<u>Mid-depth</u>						
	2109	12:30 -	66			
	2102	12:45 -	74			
	2105	1:00 -	73			
	2108	1:15 -	77			
	2114	1:30 -	69			
	2117	1:45 -	69			
	2120	2:00 -	67			
	2123	2:15 -	68			
<u>Bottom</u>						
	2100	12:30 -	66			
		Same as Mid-depth				
	2124	4:20 -	68	70.2	69.7	73%
				69.9	P. 49	

SURVEY DISPOSAL METHODS. DilutionNew York Harbor-Dissolved Oxygen in Mill. UPPER BAYAverage C.C. per Liter.

Page No. 20.6

Att. No. 1H413

NEAR ROBBINS REEFCOMPUTED BY G.H.CHARTED BY

Date of Survey Jan. 16

Date of Survey Jan. 16

Date of Collection Oct. 23, 1911 HWGv. I. 8:00AM LW 5:00PM

	Sample No	Time	Oxygen C.C. per Liter	Averages C.C. per Liter		
				Each Current	All Depths	Both Currents All Depths
<u>Flood Current</u>						
<u>Depth 1 ft.</u>	2083	9:30AM	4.78			
	2086	9:45 "	4.72			
	2089	10:00 "	4.85	(8 samples)		
	2092	10:15 "	4.92	4.81		
<u>Mid-depth</u>	2084	9:31 "	4.63			
	2087	9:47 "	4.72			
	2090	10:02 "	4.83	(8 samples)		
	2093	10:17 "	4.91	4.78		
<u>Bottom</u>	2085	9:35 "	4.65			
	2088	9:50 "	4.72			
	2091	10:05 "	4.83	(8 samples)	(8 samples)	
	2094	10:20 "	4.92	4.78	4.79	
<u>Ebb Current</u>						
<u>Depth 1 ft.</u>	2095	12:30PM	4.10			
	2101	12:45 "	4.31			
	2104	1:00 "	4.48			
	2107	1:15 "	4.78			
	2113	3:30 "	4.81			
	2116	3:45 "	4.58			
	2119	4:00 "	4.40	(8 samples)		
	2122	4:15 "	4.4	4.46		
<u>Mid-depth</u>	2099	12:35 "	4.10			
	2105	12:47 "	4.58			
	2108	1:01 "	4.55			
	2109	1:19 "	4.78			
	2114	3:35 "	4.58			
	2117	3:47 "	4.40			
	2120	4:03 "	4.24	(8 samples)		
	2123	4:17 "	4.24	4.43		
<u>Bottom</u>	2100	12:35 "	4.10			
	2124	4:20 "	4.24	(8 samples)	(8 samples)	(8 samples)
				4.42	4.44	4.62
					4.70	4.70

DISPOSAL METHOD: Dilution
 NEW YORK HARBOR Dissolved Oxygen in P.M. **UPPER BAY**
 Average % of Saturation **NEAR ROBBINS REEF**

File No.	20.5
Acc. No.	TH376
Date	Jan 10
Time in Date	10:30 AM
Sample No.	2124
Comments:	W.M.Govt 9:30 AM LW 3:30 PM

Date of Collection Oct 24 1911 W.M.Govt 9:30 AM LW 3:30 PM

	Sample No.	Time	% of Saturation	Averages		
				Percent of Saturation Each Current	All Depths	Both Currents + All Depths
Flood Current						
Depth 1 ft.						
	2128	9:48 AM	72%			
	2131	10:00 -	73			
	2134	10:15 -	76	(4 samples)		
	2139	10:20 -	76	74.2%		
Mid depth						
	2129	9:48 -	69			
	2132	10:03 -	70			
	2135	10:18 -	72	(4 samples)		
	2138	10:33 -	75	72.5		
Bottom						
	2130	9:51 -	69			
	2135	10:03 -	70			
	2136	10:23 -	72	(4 samples)		
	2139	10:36 -	79	72.5	(4 samples)	73.1%
Ebb Current						
Depth 1 ft.						
	2145	12:45 PM	77			
	2146	1:00 -	78			
	2149	1:15 -	79			
	2152	1:30 -	84			
	2158	5:45 -	76			
	2161	4:00 -	78			
	2164	4:15 -	79	(4 samples)		
	2167	4:30 -	80	78.5		
Mid depth						
	2146	12:48 -	79			
	2147	1:00 -	80			
	2150	1:12 -	81			
	2153	1:23 -	83			
	2159	5:47 -	76			
	2162	4:02 -	78			
	2165	4:17 -	81	(4 samples)		
	2168	4:32 -	83	80.5		
Bottom						
	2148	12:51 -	79			
			Same as Mid-depth			
	2169	4:35 -	83	(4 samples)	(4 samples)	(4 samples)
			80.5	79.8	76.9	76.9%

ROBERT DISTEL, Plaintiff - Defendant
 ROBERT DISTEL, Plaintiff - Defendant vs. BILL, UPPER Bay
 Average C.C. per Liter
 1000 ml. sample
 Sample No. 1H416
 Date taken Jan. 16 1951
 Sample No. 1H416
 Date taken Jan. 16 1951

Date of Collection: Oct. 24 1951 At 6:00 P.M. Lat 39° 45'

Sample No.	Time	Average C.C. per Liter	Average C.C. per Liter		
			Black Current Bath Dishes	White Current Bath Dishes	Both Currents dishes
<u>Plank Lagoon</u> <u>Depth 1 ft.</u>					
2/167	9:00 AM	6.65			
2/167	10:00 -	6.71			
2/167	10:15 -	6.73			
2/167	10:30 -	6.73			
			(Average)		
			6.73		
<u>Mid-depth</u>					
2/167	9:00 -	6.89			
2/167	10:00 -	6.86			
2/167	10:15 -	6.85			
2/167	10:30 -	6.85			
			(Average)		
			6.85		
<u>Bottom</u>					
2/167	9:00 -	6.88			
2/167	10:00 -	6.86			
2/167	10:15 -	6.85			
2/167	10:30 -	6.85			
			(Average)		
			6.85		
<u>East Passage</u> <u>Depth 1 ft.</u>					
2/167	10:00 AM	6.94			
2/167	10:00 -	6.90			
2/167	10:15 -	6.91			
2/167	10:30 -	6.90			
2/167	10:45 -	6.86			
2/167	11:00 -	6.86			
2/167	10:15 -	6.91			
2/167	10:30 -	6.88			
			(Average)		
			6.90		
<u>Mid-depth</u>					
2/167	10:00 -	6.94			
2/167	10:00 -	6.90			
2/167	10:15 -	6.91			
2/167	10:30 -	6.90			
2/167	10:45 -	6.86			
2/167	11:00 -	6.86			
2/167	10:15 -	6.91			
2/167	10:30 -	6.88			
			(Average)		
			6.90		
<u>Bottom</u>					
2/167	10:00 -	6.95			
2/167	10:00 -	6.90			
2/167	10:15 -	6.91			
2/167	10:30 -	6.90			
2/167	10:45 -	6.86			
2/167	11:00 -	6.86			
2/167	10:15 -	6.91			
2/167	10:30 -	6.88			
			(Average)		
			6.90		

ANALYST: D. P. MURRAY - Director
NEW JERSEY STATE DEPARTMENT OF ENVIRONMENT
Date of Submission from GULF RESEARCH RESEARCH BAY
624

Analyst: ZD. S.
Date: 11/26/64
Date: Jan 9
Date: JAN 9 1965

DATE OF COLLECTION Oct. 6 1964 HHR 6001 6' MAX 10' DEPTHS NOB, T, PH

Sample No	Time	% Saturation	Average Percent of Saturation		
			Each Current Depth	All Percent	Both Currents All Depths
<u>Pined Current</u>					
1818	8:00 AM	62%			
1820	8:05 -	61			
1822	8:20 AM	61			
1824	8:25 -	60			
1826	8:30 -	61			
1828	8:40 -	60			
1830	8:45 -	61			
1832	8:50 -	59			
1834	8:55 -	59			
1836	9:00 -	57			
1838	9:05 -	57			
1840	9:10 -	58			
1842	9:15 -	58			
<u>Middle Depth and Bottom</u>			(Average)		
1844	8:00 AM	68			
1846	8:05 -	67			
1848	8:10 -	66			
1850	8:20 AM	65			
1852	8:25 -	64			
1854	8:30 -	65			
1856	8:35 -	64			
1858	8:40 -	64			
1860	8:45 -	63			
1862	8:50 -	61			
1864	8:55 -	62			
1866	9:00 -	61			
1868	9:05 -	61			
1870	9:10 -	60			
1872	9:15 -	59			
1874	9:20 -	59			
1876	9:25 -	58			
<u>Bottom Current, 42' Below S</u>			(Average)	57.50	60.6%
			6.75	7.50	

Disposal Methods Dilution
 New York Harbor Disposal Drifters in 1971 LOWER END OF
 Average % of Saturation from Cross Sections Newark Bay
Sampled by GEM Calibrated by
1971-1972

205
1H 365

2 3
Jan. 8

Date of Collection Oct 6, 1971 HANGER 6' FROM BOTTOM HW 6:15 PM

	Sample No	Time	% of Saturation	AVERAGE Percent of Saturation		
				Each Current Depth	All Depths	Both Currents All Depths
Ebb Current						
Depth 1.5'	1835	8:42M	62%			
	1835	8:50-	61			
	1837	8:58-	63			
	1839	9:08-	71			
	1841	9:08-	68			
	1844	9:14-	66			
	1846	9:20-	65			
	1848	9:26-	68			
	1850	9:30M	66			
	1851	9:40M	68			
	1852	9:42-	70			
	1857	10:18-	71			
	1859	10:24-	71			
	1861	10:40-	70			
	1863	10:48-	65			
	1866	11:12-	67			
	1868	11:18-	64			
	1870	11:24-	69			
Mud depth and Bottom	1885	11:30M	66.4%			
				C. 77	P. 74	

DISPOSAL METHODS Division
 New York Harbor Received Oxygen 100%
 Army Test Saturation from Cross Sections NEWARK DAY
2044

Date of Collection Oct 6, 1961 Height 1.60' AM LW 12.00 PM HW 6.00 PM

	Sample No	Time	% of Saturation	Average		
				Each Depth	All Depths	Born Correlative All Depths
Flood Current See Sheet					60.6%	
ebb current				60.4%		
Mid depth and bottom	1834	8:31 AM	63%			
	1834	8:32 -	63			
	1838	8:38 -	63			
	1840	8:40 -	71			
	1841	8:40 -	71			
	1843	8:40 -	68			
	1846	8:46 -	67			
	1847	8:47 -	69			
	1848	8:48 -	64			
	1851	8:51 AM	69			
	1853	8:56 -	69			
	1854	8:59 -	60			
	1856	9:14 -	73			
	1858	9:20 -	69			
	1860	9:24 -	71			
	1862	9:28 -	70			
	1864	9:40 -	67			
	1865	9:40 -	67			
	1867	9:44 -	69			
	1869	9:48 -	64			
	1871	9:50 -	52	67.2	66.8 ± .09	64.1% ± .17

SUBJECT: DODGEH METHOD - DILUTION
 NEWARK HARBOR DISSOLVED OXYGEN IN 1911 LOWER END OF
 Average C.C. per Liter from cross section NEWARK BAY
 DATE OCTOBER 6, 1911

FILE NO. 29.5
 ACC. NO. 14402
 SHEET 1, TOTAL SHEET 3
 DATE JAN. 13, 1912

Date of Collection Oct. 6, 1911 H.H.G.W.I 6:08 PM LW 134 PM HW 6:35 PM

	Sample No.	Time	Oxygen C.C. per Liter	Averages C.C. per Liter			
				Each Current		Both Currents All Depths	Both Currents All Depths
				Each Depth	All Depths		
<i>Flood Current Depth 1/2</i>							
	1878	8:00 AM	3.88				
	1880	8:06 -	3.84				
	1872	8:30 AM	3.88				
	1874	8:36 -	3.84				
	1877	8:44 -	3.89				
	1879	8:50 -	3.88				
	1881	8:56 -	3.92				
	1883	8:58 -	3.88				
	1885	8:58 -	3.72				
	1888	8:58 -	3.61				
	1890	8:58 -	3.55				
	1892	8:58 -	3.68				
						3.79	
<i>Mid-depth and Bottom</i>							
	1829	8:02 AM	3.88				
	1831	8:08 -	4.12				
	1832	8:10 -	3.70				
	1873	8:32 PM	3.88				
	1875	8:38 -	3.84				
	1876	8:40 -	4.12				
	1878	8:46 -	3.89				
	1880	8:52 -	3.83				
	1882	8:58 -	3.92				
	1884	8:58 -	3.88				
	1886	8:58 -	3.84				
	1887	8:58 -	3.98				
	1889	8:58 -	3.61				
	1891	8:58 -	3.55				
	1893	8:58 -	3.64				
						3.85	3.82
						3.94	3.76

SUBJECT DISPOSAL METHODS - DILUTION
 NEW YORK HARBOR DISSOLVED OXYGEN 191911 LOWER END OF
 AVERAGE CC PER LITER FROM CROSS SECTIONS NEWARK BAY
 COMPUTED BY C.R.H. CHECKED BY
 SHEET 2 TOTALS
 DATE JAN. 13 1932

DATE OF COLLECTION, OCT. 6, 1911. HW GOV'S 6:30A.M. LW 10:45P.M. HW 6:30P.M.

SAMPLE No.	TIME	OXYGEN CC. PER LITER	AVERAGES		
			C.C. PER LITER		BOTH CURRENTS & ALL DEPTH
			EACH CURRENT	ALL DEPTH	
EBB CURRENT DEPTH 1 FT.					
1853	8.14AM	3.89			
1855	8.38 -	3.89			
1857	8.56 -	3.92			
1859	10.00 -	4.48			
1861	10.08 -	4.26			
1864	10.19 -	4.17			
1866	10.20 -	4.10			
1868	10.26 -	4.06			
1870	12.00M	4.18			
1872	12.04PM	4.26			
1875	12.10 -	4.44			
1877	12.18 -	4.51			
1879	12.34 -	4.48			
1881	2.00 -	4.48			
1883	2.04 -	4.36			
1886	2.12 -	4.17			
1888	2.18 -	4.10			
1890	2.24 -	4.30	18 Samples 4.31		
MID-DEPTH & BOTTOM		SEE SHEET 3		Ex 94	N 77.

SUBJECT: DISPOSAL METHODS Dilution
 New York Harbor Dissolved Oxygen in 1911 LOWER END OF
 Average C.C. per Liter - from cross section NEWARK BAY
 COMPILED BY O.D.H. CHECKED BY _____
 MADE IN CONNECTION WITH _____

FILE NO. 205
 ACC NO. 1H404
 SHEET 3 TOT IN COMP 3
 DATE Jan. 15 1912

Date of Collection, Oct. 6, 1911 HW 6:00 AM. LW 12:55 PM. HW 6:55 PM.

Sample No.	Time	Oxygen C.C. per Liter	Averages C.C. per liter		
			Each Current	All Currents	Born Depths - All Depths
Flood Current. see sheet 1.					(37 samples) 3.82
Ebb Current Depth 1 Ft. see sheet 2					(4 samples) 4.21
Mid-depth and Bottom	1834	8:16AM. 3.85			
	1836	8:22 - 3.89			
	1838	8:28 - 3.97			
	1840	10:02 - 4.40			
	1842	10:08 - 4.40			
	1843	10:10 - 4.26			
	1845	10:16 - 4.17			
	1847	10:21 - 4.10			
	1849	10:28 - 4.06			
	1851	12:02 PM 4.32			
	1852	12:06 - 4.26			
	1854	12:08 - 4.26			
	1856	12:14 - 4.58			
	1858	12:20 - 4.58			
	1860	12:26 - 4.48			
	1862	2:02 - 4.26			
	1864	2:06 - 4.26			
	1865	2:08 - 4.26			
	1867	2:14 - 4.17			
	1869	2:20 - 4.20	(15 samples)	(39 samples) 4.22	(68 samples) 4.22
	1871	2:26 - 4.20	4.25	4.25	4.25

THE PEOPLE OF THE STATE OF NEW YORK,
COMPLAINANTS,

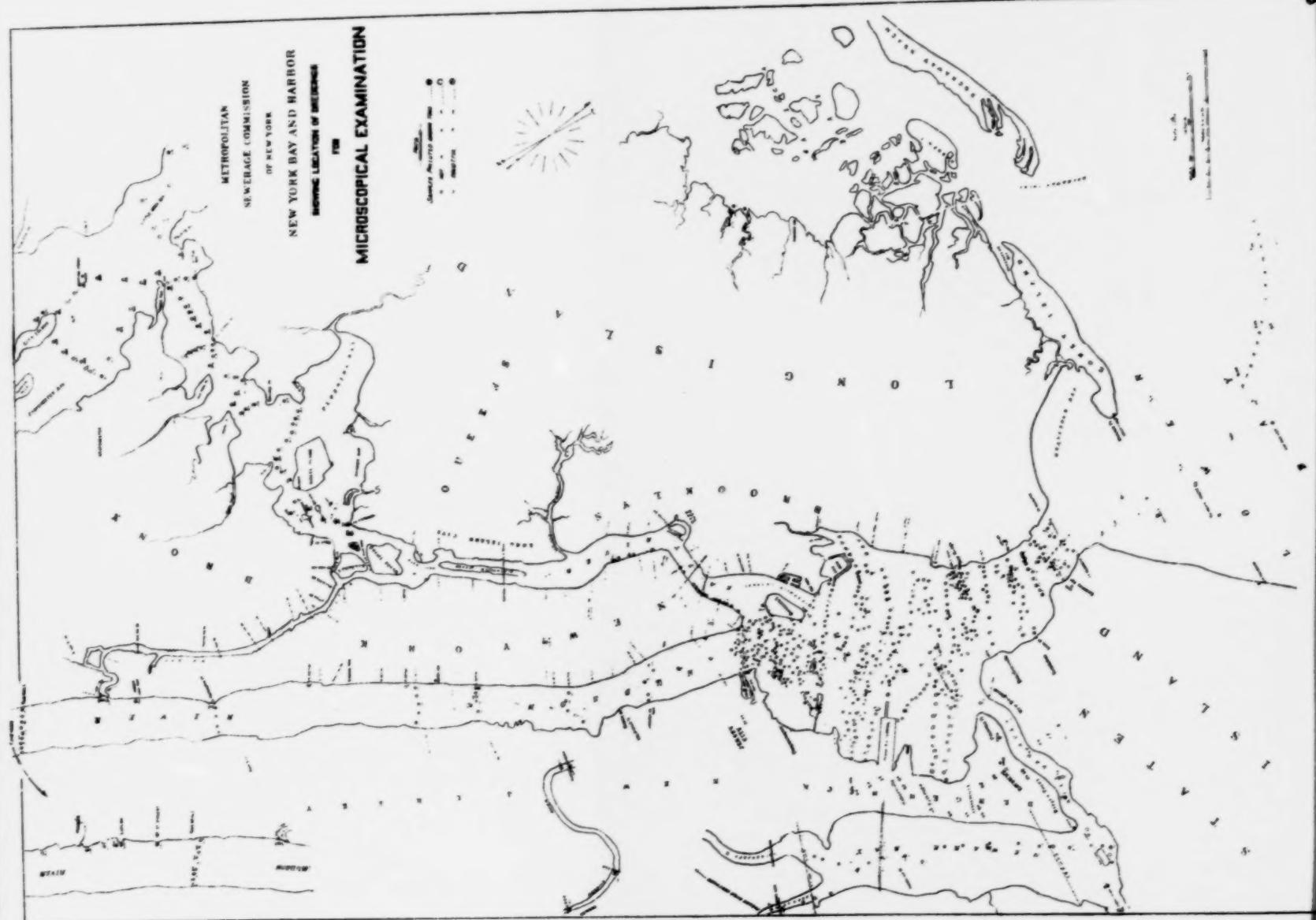
vs.

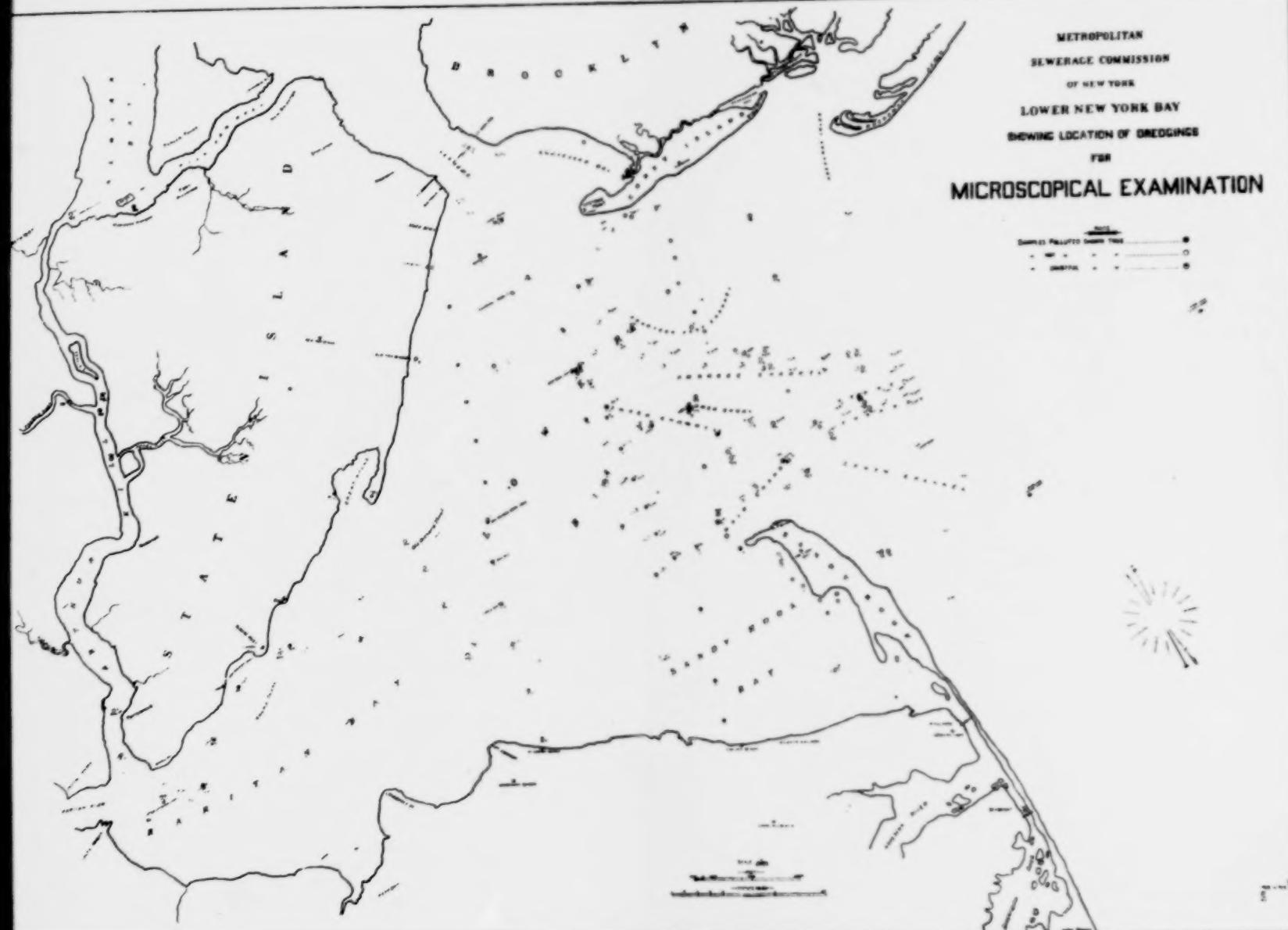
STATE OF NEW JERSEY ET AL.

HERE FOLLOW COMPLAINANTS' EXHIBITS

Nos. 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113,
114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124.

JAMES D. MAHER,
Commissioner.





Complainant's Exhibit No. 101
James A. Maher,

METROPOLITAN
SEWERAGE COMMISSION
OF NEW YORK
JAMAICA BAY
MAP SHOWING LOCATIONS OF DREDGINGS
FOR
MICROSCOPICAL EXAMINATION



NOTE
SAMPLES POLLUTED SHOWN THIS

•	○	□
•	○	□
•	○	□

Complainant's Exhibit No. 102
Ames, Mather,

OXYGEN

1911

- 1835 SAMPLES -

Complainants Exhibit No 103

James D. Malon
Commissioner





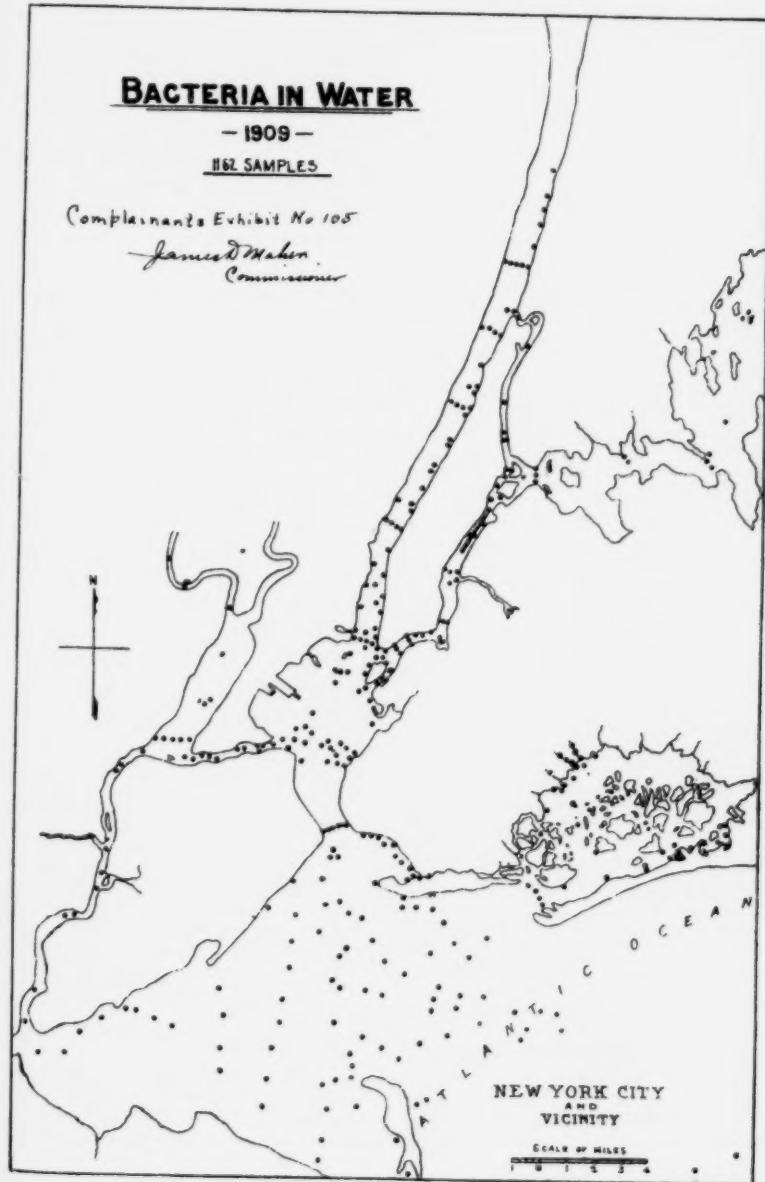
BACTERIA IN WATER

— 1909 —

162 SAMPLES

Complainants Exhibit No 105

James M. Walker
Commissioner



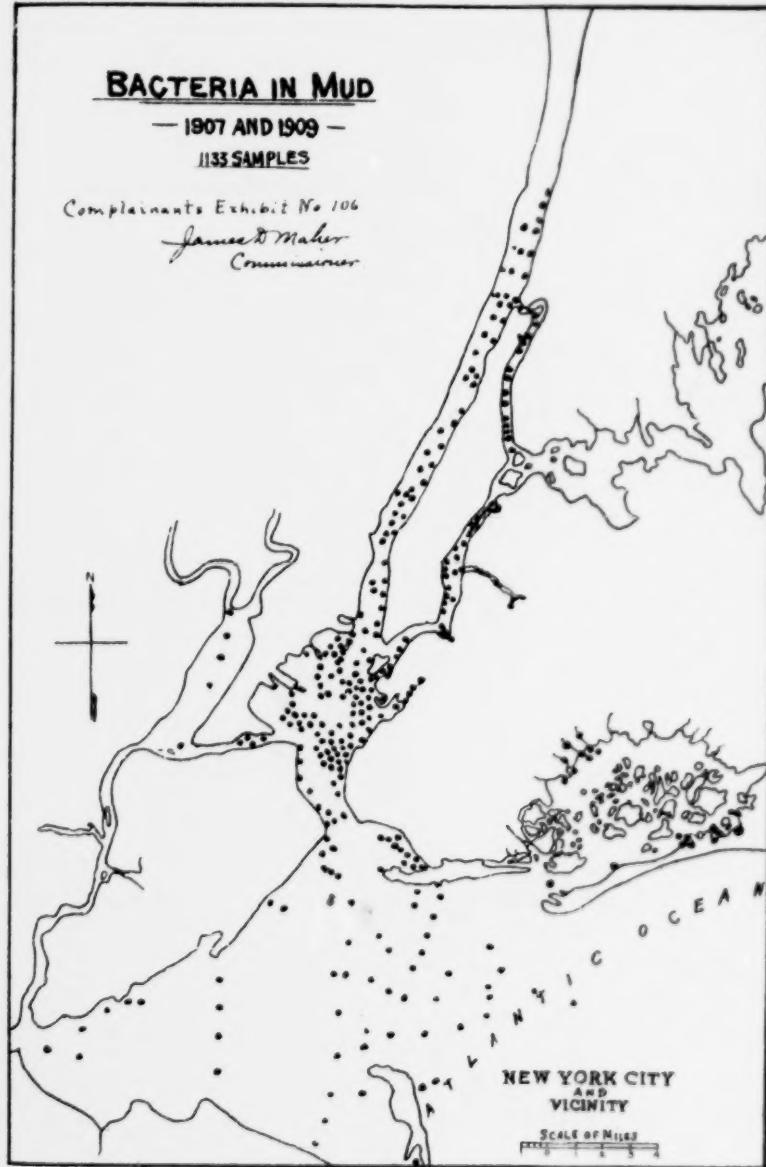
BACTERIA IN MUD

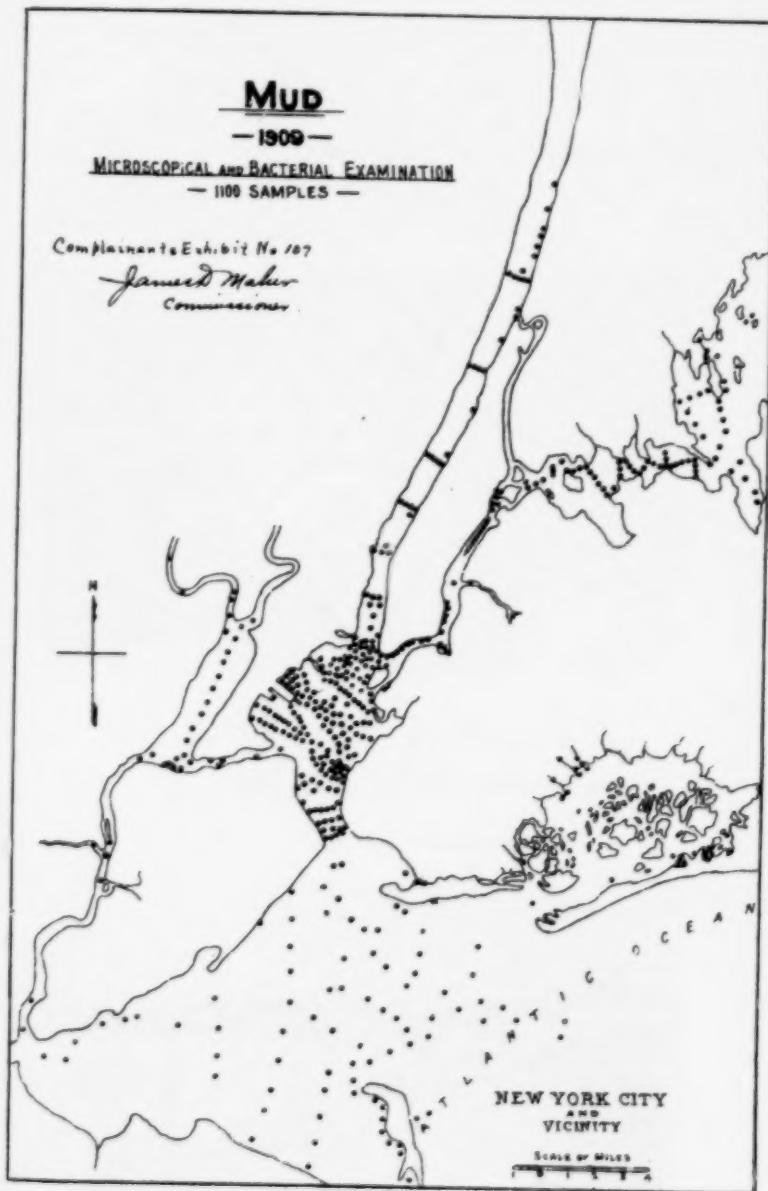
— 1907 AND 1909 —

1135 SAMPLES

Complainants Exhibit No 106

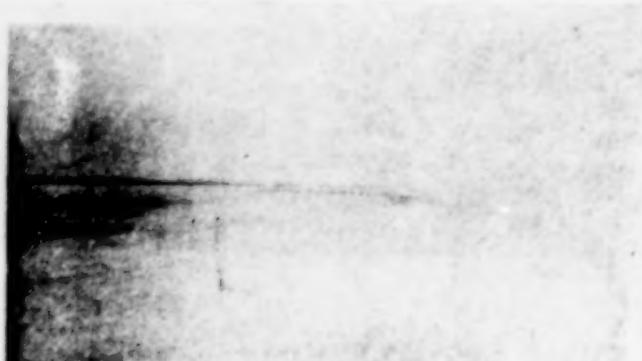
*James D. Maher
Commissioner*





Thur Oct 7, 1924. Sawm mill remains Bay from 20th ward shore.
Ground track. Sawm mill started from creek mouth into Old Mill
Creek, Hamlet. Total at 1:25 p.m.

*1st Photo graphed sawm mill from looking N.E. Sawdust wind
blowing off sawdust off from #1



Complainant Exhibit No. 608 D. Maher Com.

Complainant. Ex Libt No. 109.
James D. Maher
Commissioner



Complainant Ex Libt No. 109

Complainants Exhibit No. 110
James D. Mader,
Commissioner



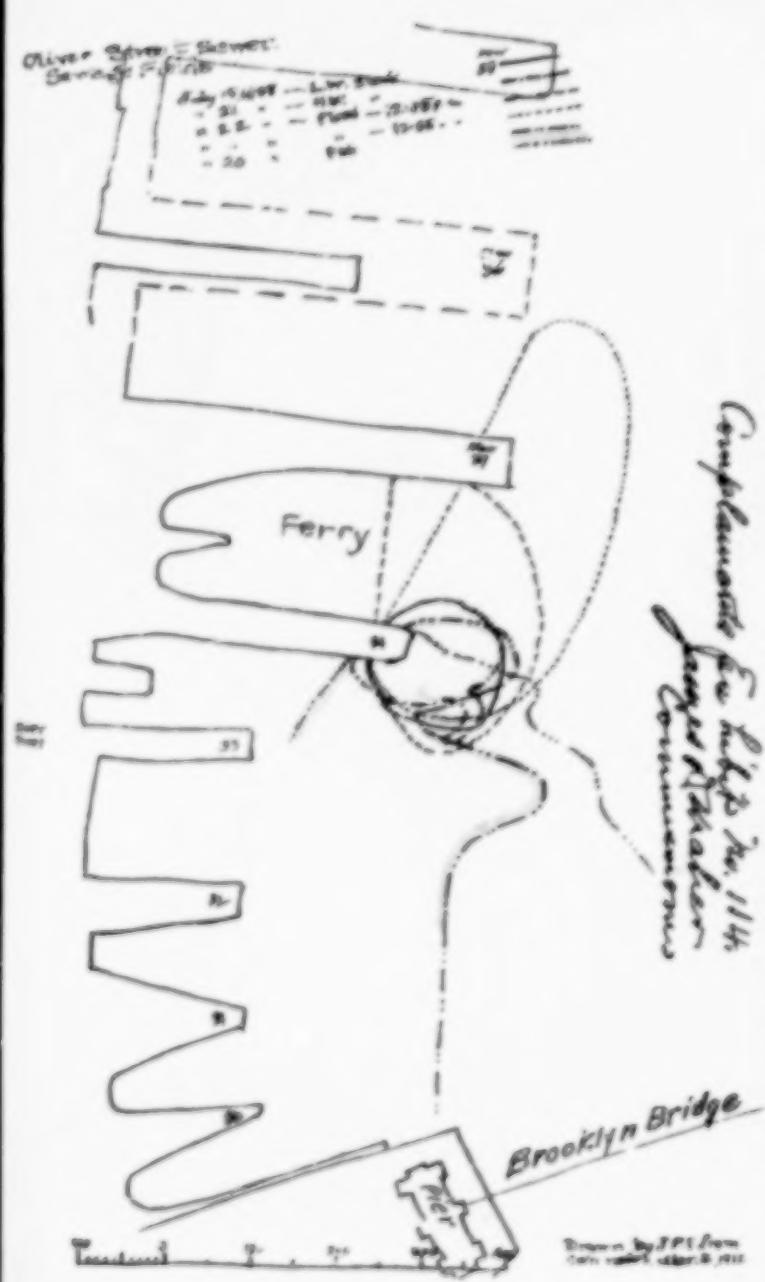
Complainants Exhibit No. 111
James D. Mader,
Commissioner



Oliver Street & Shores
Services Feb 19

Balley 15.00⁰⁰ - Low Grade
- 21 - 1.00 - 15.00 -
a S.S. - Fuel - 15.00 -
- 2.0 - 0.00 -
- 2.0 -

50
50



Complainant for ship No. 114
Lester Shaker
Communications



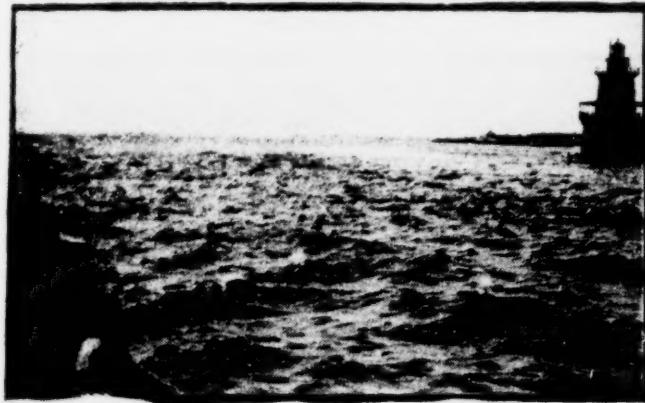
Pete

Jameson Bay

Complaint Exhibit No 115
Lines of Lakes
Ornacation.

1000 800 600 400 200 100 50 25 10 5

Complainants Exhibit No. 116
James D'maker,
Commissioner.



Complainants Exhibit No. 117
James D'maker,
Commissioner.



Complainants Exhibit No. 118

James D. Maher
Commissioner



Complainants Exhibit No. 119

James D. Maher,
Commissioner.



Complainants Exhibit No. 120
James D. Maher
Commissioner



Complainants Exhibit No. 121.
James D. Maher
Commissioner



Complainants Exhibit No. 122.
James D. Mates
Commissioner.



THE PEOPLE OF THE STATE OF NEW YORK,
COMPLAINANTS,

vs.

STATE OF NEW JERSEY ET AL.

COMPLAINANTS' EXHIBIT No. 123.

showing the Plan of the Harbor and Land Commission of 1895.

JAMES D. MAHER,
Commissioner.